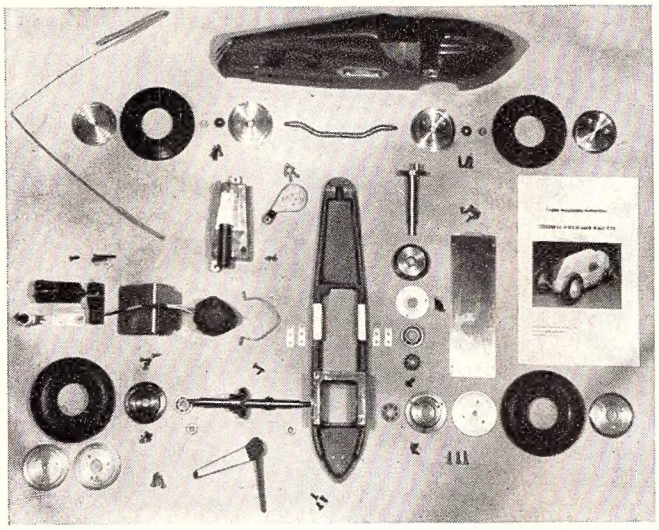
THE MODEL CRAFTSMAN

MAY 1947

25 CENTS

Another "First" For The

"SPEEDWAY PACEMAKER"



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The Speedway Pacemaker Builders Kit

"The makers of the already famous Speedway Pacemaker now are producing a complete kit of precision machined parts ready for assembly into the cleanest-looking and fastest-running prototype, model gas engine race car on the market today. This kit is especially for those fans who like to build 'em themselves, and every detail of this kit will be completely machined, ready for assembly. Every single part of the Speedway Pacemaker, the car noted for completeness, will be there, enabling the fan to construct his own model of this well-known car." $42.50

—AND FOR THAT ALL-IMPORTANT MAINTENANCE ON THE CARS YOU HAVE . . . OF THE ONES YOU WISH TO DESIGN YOURSELF:

We are happy to announce that all or any of the Speedway Pacemaker parts are available from stock; from gears and axles to wheels and gas tanks. Write us for complete parts listing. Note some of the major available parts in our factory stock today:

Axles, Free & Drive	Bridle Brackets	Pinion & Bevel Gears	Battery Packs
Body, Laminated Plastic	Gas Tanks	Special Crankshafts	Exhaust Ports
Ball Bearings	Flywheels	Radiator Grilles	—and—

The ultra streamlined free wheel tire suitable for both proto and spur gear cars . . . $ .85

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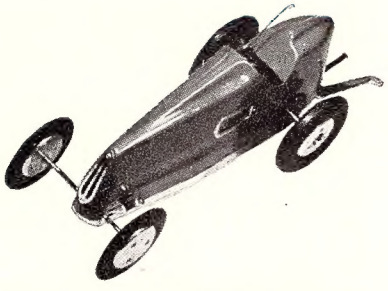
Increase your speeds with the new Speedway Pacemaker drive tire, precision made and speed engineered $1.25

TIRES!!!

The new streamline spur gear tire designed by J. Olender, the tire of a winner $2.00

TIRES!!!



AND NATURALLY—

This is all in addition to our regular production SPEEDWAY PACEMAKERS, the cars noted for completeness, available in three styles; complete with hornet engine installed for $110.00, complete less engine for $55.00, or complete with your own "pet" engine mounted for $85.00. Write us or see your nearest dealer for complete descriptive literature.

See your local Hobby Dealer, if they cannot supply you, write us for direct factory shipment.

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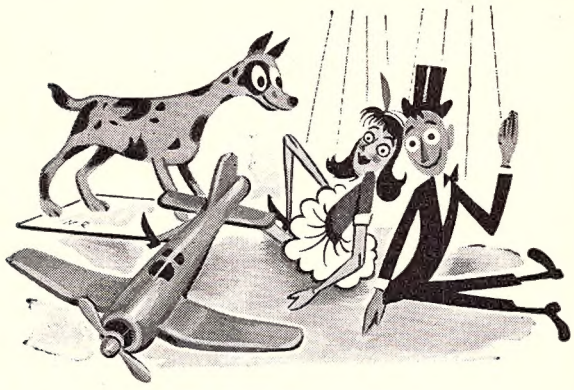
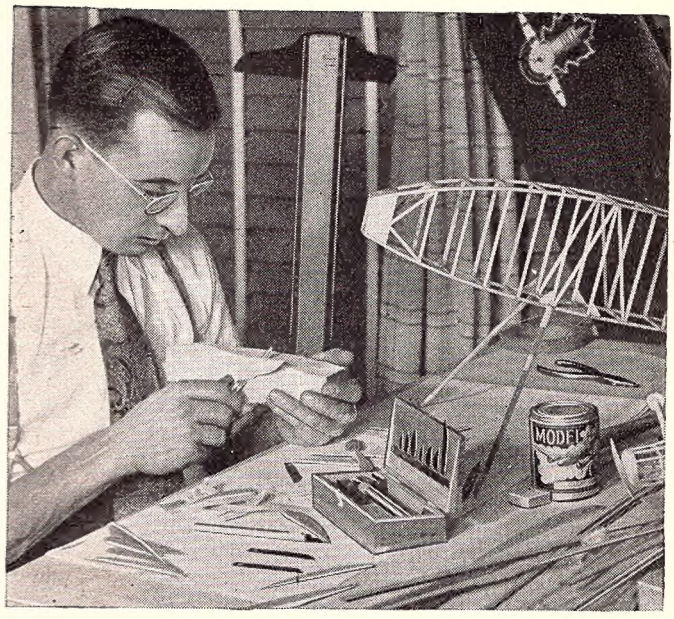
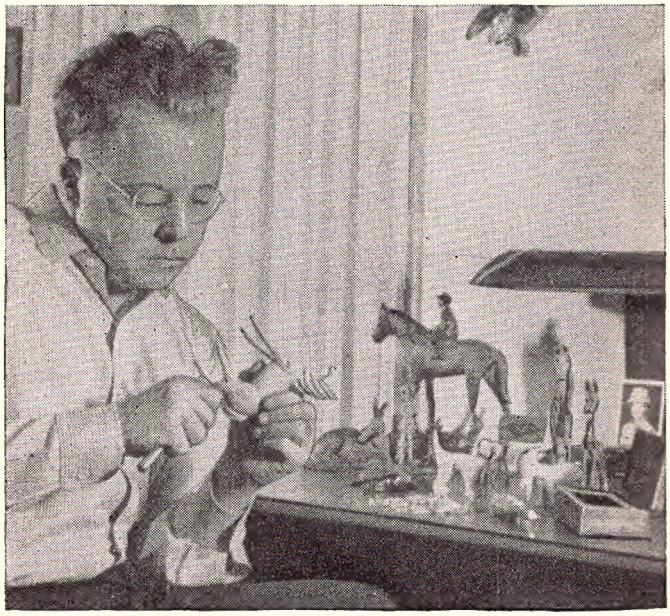


all "duck-soup" with X-acto!

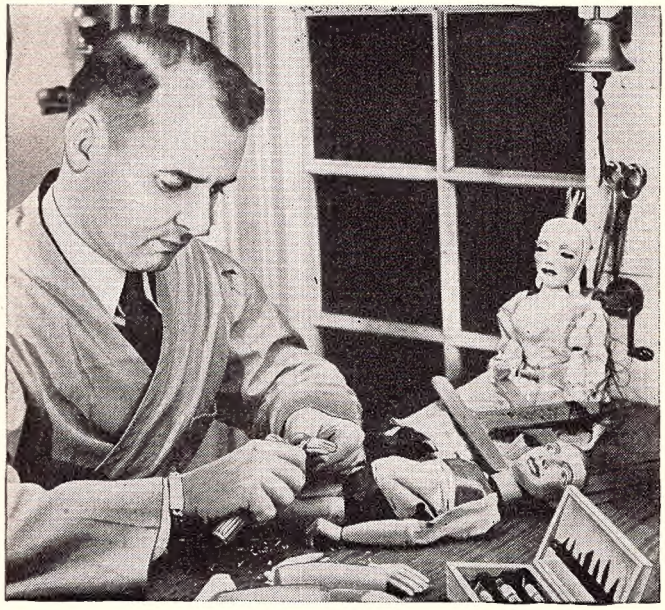
Experts prefer X-acto because it's always sharp, always ready, with the just-right blade and tool for every job. Amateurs find X-acto's safer, surer — helps them turn out better jobs, makes them *feel* like experts. Try X-acto for *your* hobby!



Grand Championship Trophy winner at Toronto's Eaton Contest, R. Bruce Lester finds X-acto "helps turn out better models . . . best of all the knives I've used in building models for 20 years!"



Expert Whittler and Wood-Carver Leroy Pynn, Jr. of Wisconsin says "X-acto's variety of shapes and sizes means a lot to a constant whittler . . . and it stands up just as well with hard as with soft wood."



Puppetry Instructor Bernard H. Paul at Maryland Institute of Art recommends X-acto Knives "for detail work on heads, as well as for heavier body carving . . . and because they're so easily handled even for a beginner."

x-acto* *

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Singly or in sets, 50c to $50.
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In Canada: Handicraft Tools, Ltd., Hermant Bldg., Toronto

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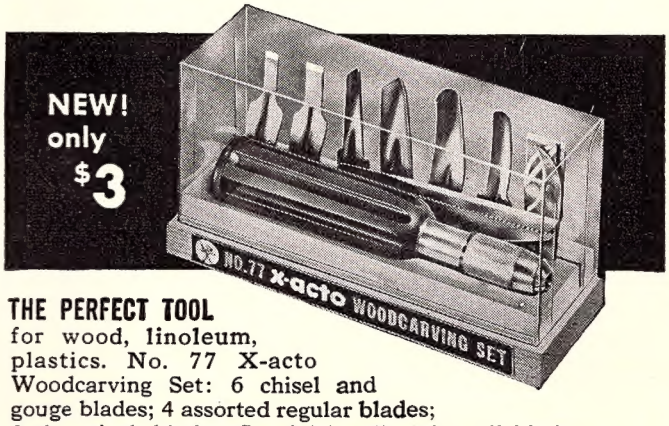

THE PERFECT TOOL for wood, linoleum, plastics. No. 77 X-acto Woodcarving Set: 6 chisel and gouge blades; 4 assorted regular blades; 2 three-inch blades. Special handle takes all blades.

SWELL MAG, BUT . . .

Just a casual word to say that you have a swell mag. You are doing a nice job of covering all of the scale model hobbies, but would like to see more articles on model boats. How about some information on forming a model boat club? . . . *R. E. Mulford, 781 Fenelon Place, Dubuque, Iowa.*

$64 QUESTION?

I was told or saw in your mag (I've forgotten which) an advertisement for a model oil clutch similar, in effect, to those used in Chrysler cars.

I'm a model railroader working in O gauge and have the idea that perhaps one of these outfits, although designed for racing cars, might be put to work on a locomotive. I want something that will take that disconcerting jackrabbit start out of my loco and this affair would, I think, do the job if it could be coupled in between motor and worm gear, providing it isn't too large for an O gauge firebox.

I've looked through all back issues of your magazine that are available and have been unable to locate the advertisement. Would you be so kind as to give me the name of the manufacturer or any information you may have on this article. . . . *C. H. Steele, Guelph, Ontario.*

BARKLEY SPEAKS UP

In regard to the letter published in the F bruary issue, I want to say that the plans submitted to me by Mark Swerdfeger for the Narrow Gauge Caboose had no name or any other identification on them. It was the first time I had ever used any plans other than original plans drawn by me in construction articles for your magazine. Of course, I should have inquired further but it was Mark's suggestion that I use them and as long as they were in his possession I thought it was all right. Sorry it happened and wish I had drawn my own as the model was built. Have written over thirty articles for MC and they were all original, drawings and all, except for this particular one. As for the castings made by Walt Stone, I gave no one credit for them, nor did I take any credit. I merely stated they were made by someone else for Mark and at the time did not know who made them. I remember thinking that the drawings may have been a rough copy of the original builder's plans.

If you desire you may publish part of this letter in regard to the caboose plans. It may clear up a misunderstanding or wrong impression as I have not intentionally copied anything or tried to take credit for any other person's efforts. . . . *John R. Barkley, N. Hollywood, Calif.*

THE MODEL CRAFTSMAN

Ramsey, N. J.

Including "THE MODELMAKER"—Est. 1924 and MINIATURE RAILROADING Magazine

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MAY, 1947 — Vol. 15, No. 12

ALL IN FAVOR

Might I add a commendation to your magazine for the articles you publish on model boat building. I believe yours is the only one giving space to such information and am sure that there are many hobby model craftsmen who appreciate seeing and reading articles on scale models or power boats both in the hydroplane and cruiser type. . . . *Henry Putman, St. Paul, Minn.*

FALLING OFF

What's the matter with the Live Steamers? We do not hear or see much of them in MC lately. Are they busy like myself with not much time for writing or are they falling by the right-of-way.

I am busy but slowly getting my 4-4-0 model 1880 ¾" scale live steamer together. What I would like to see in MC is a table showing all the gauges and distance between outside rails. . . .*C. T. Caswell, Casper, Wyoming.*

CALLING MONTREAL!

What would be the cost of an article in your Model Craftsman? I want to get in touch with persons that build model race cars in Montreal and vicinity. I could call on them and see if we could help each other.

I'm a member of AMRCA and I would like to form a bunch to race in the States. So let me know what is the fee. I would like to have these persons write to me or call personally if they are interested in model cars. I'll help your magazine in Canada if I get a little club formed. . . . *William Vertilneck, 711 Prevost St. Lachine, Quebec.*

TO OUR READERS

WE regret to announce that due to the greatly increased cost of everything that goes into the producing of this magazine we are forced to increase our newsstand price to 35c beginning with the June issue.

Yearly subscriptions will be $4.00 in the United States and possessions and $5.00 a year in foreign countries and Canada.

We hope that our readers will appreciate that this increase is forced upon us by conditions beyond our control. We have absorbed rising costs until it is impossible to take any more.

Therefore, effective with the June 1947 issue the new rates will prevail.

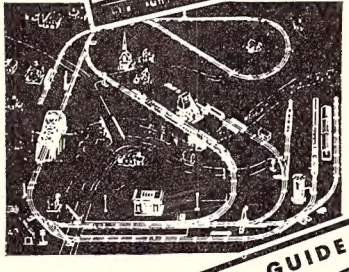
CIRCUS TAKES OVER

In the July, 1945 issue of MC, in the article "U. S. Army Hospital Car" by John Barkley on page 26: "—on order 200, delivered 100". One would wonder what could they be used for when declared surplus. Today I saw 13 go by in the second section of "The Greatest Show on Earth", as Dormitory cars. I saw them about five weeks ago in "Winter Quarters" and could not place them at that time, as I was not thinking of Army surplus. As the show will be at Madison Square Garden for some time, if you locate the car storage yard, you can see for yourself what a fine use they make. Also your readers can bring their Model Circus Trains up to date. . . .*Harley M. Lanning, Palmetto, Fla.*

HEY, FELLOWS!

HERE'S AN EXCITING NEW BOOK

FUN WITH LIONEL MODEL RAILROADING



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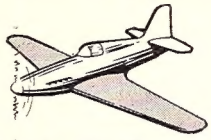

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9. Organize a Model Club?
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RAILROAD CLUB NEWS

WEST ENGLEWOOD, N. J. Another new HO club for New Jersey—the West Shore Model Railroad Society at 290 West Englewood Ave. Officers have been elected as follows: Chairman, T. Gilbert; Treas., H. Zannie; Sec'y, H. Carstens. Membership is still open to a few new members. Only HO gaugers will be considered, although other fans are most welcome to say "hello!" In addition to the model railroad, members are busy on a flock of local fan trips. These trips are keeping the camera fiends busy and a fine slide and movie collection is now being built up.

WEST ORANGE, N. J. The "Orange Mountain Model Railroad Club" was recently formed by a group of business men, all railroad enthusiasts from the "Oranges." Prospects are good for a location of their future HO pike in the vicinity of West Orange. A vast layout is being planned, with over 75 pieces of rolling stock, 8 locos, dozens of switches and plenty of track to be included. There is still room for a few more members before their quota is filled. Until new quarters are located, the club is meeting at the Willow Hobby Nook.

NEW YORK, N. Y. The New York Live Steamers have finally "broken ground," according to a release from them. Their entire three acres of ground has been cleared of all brush, grass, and trees, with the boys working hard with transit and level, preparing their future roadbed. Wooden trestle frames are being knocked out in true railroad fashion. The last few Sundays out in the open has really made these live steamers feel about 20 years younger. There is still plenty to do, so the Society is calling for manpower each and every Sunday. The boys bring their lunches and really do find a grand day in the open. All members should report to Fred Neuman at the track site, Massapequa, L. I., every Sunday at 9 A. M. He has jobs for you all.

BINGHAMTON, N. Y. The first meeting of the Binghamton HO Model Railroaders was held back in January for organization. Since then, five meetings have been held and the club completely organized, having drawn up a Charter and adopted a Constitution. The Club now meets every Monday at 7:30 P. M. in the Binghamton Boys Club, corner of East Clinton and Washington Sts. Plans for a layout are now being drawn up by various members of the club and better points of these will be combined to make up the master layout. A room 15 x 25 feet is available and construction will start in the very near future. Those interested in becoming members or visiting the club can contact their Secretary for information: Leland C. Yetter, 2 Dickenson Ave., Port Dick, Binghamton, N. Y.

Several of the Club have already joined the NMRA, and all members will soon

(*Continued on page 45*)

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Model Builders Anvil		**2.00**
Bunson Burner		**2.25**
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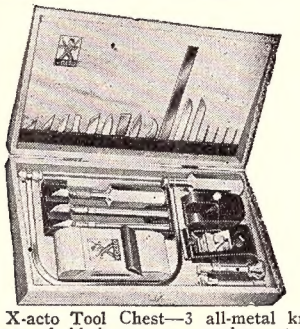
Handee Motor Tool, w/acess.		**27.50**
Woodburning Pen Set		**2.00**
61-80 Carbon Drill Sets	W/Case	4.00



No. 85 X-acto Tool Chest—3 all-metal knives; assortment of blades; saw; sander; stripper; planer; 2 drill holders; 10 drills; 6" steel ruler; complete in wooden chest, $12.50. (Illustrated)

X-ACTO #1 & #2 Knife	$ .50
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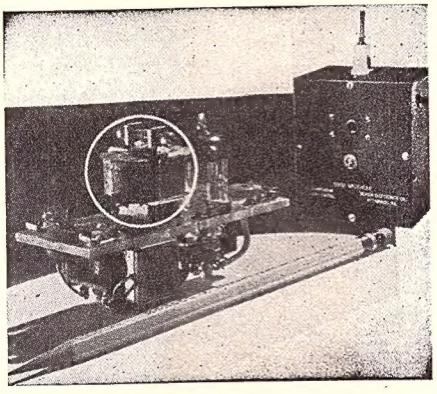

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RAILROAD ACCESSORIES

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Varney Power Trucks "HO"	$11.50
Pittman Power Pack	17.75
Challenger Switch Machine	2.50
Kasiner's "O" Stream Pullman (Comp.)	8.50
Kasiner "O" Stream. Coach (Comp.)	9.50
Kasiner "O" Duplex Pullman (Comp.)	8.95
Indianhead Switch Machine	1.25

"HO" CAR KITS

Varney	$1.90
Lehigh	2.50
J-C	1.35
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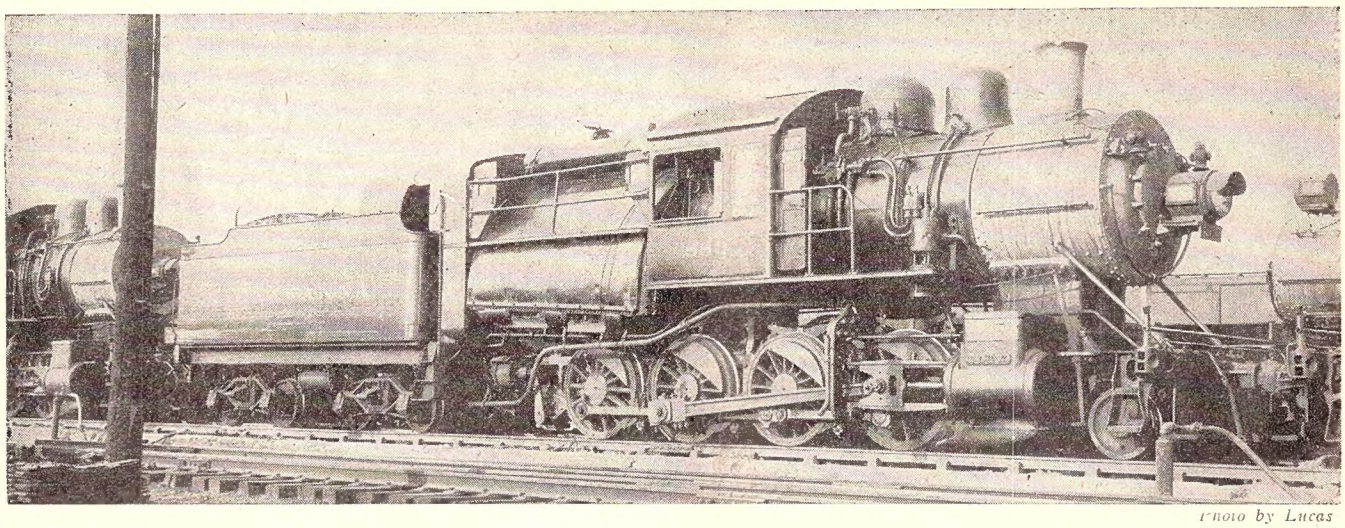


Photo by Lucas

DL&W Consolidation

PART I

By WARREN B. CRATER

HERE is a new idea for a locomotive construction article. With our staff artist following the builder's work and the author himself writing as he builds, we give our readers a more comprehensive presentation.

Mr. Crater has been employed on and about locomotives for the past 25 years, including over two years in locomotive shops of two roads, 18 years as fireman on two roads and five years as engineer. In addition, he has been building models for 17 years. This marks his 23rd locomotive and his first is still running! Warren has also built up nearly one hundred cars, most of which are made from his own drawings (locomotives included) scaled from prototype. He keeps a large supply of brass and steel on hand in stock sizes, as well as driving wheels, castings, gears, motors and other available parts.

THIS consolidation for your O-gauge freight is being built from prints of the prototype engines which were numbered in the 890's on the Lackawanna. Construction begins with the main frame. A steel frame with brass bearings is preferred and will be described here in detail. The fellow without a lathe and for those who may prefer it, however, may use heavy brass channel. Allowances will have to be made for available sizes of this material.

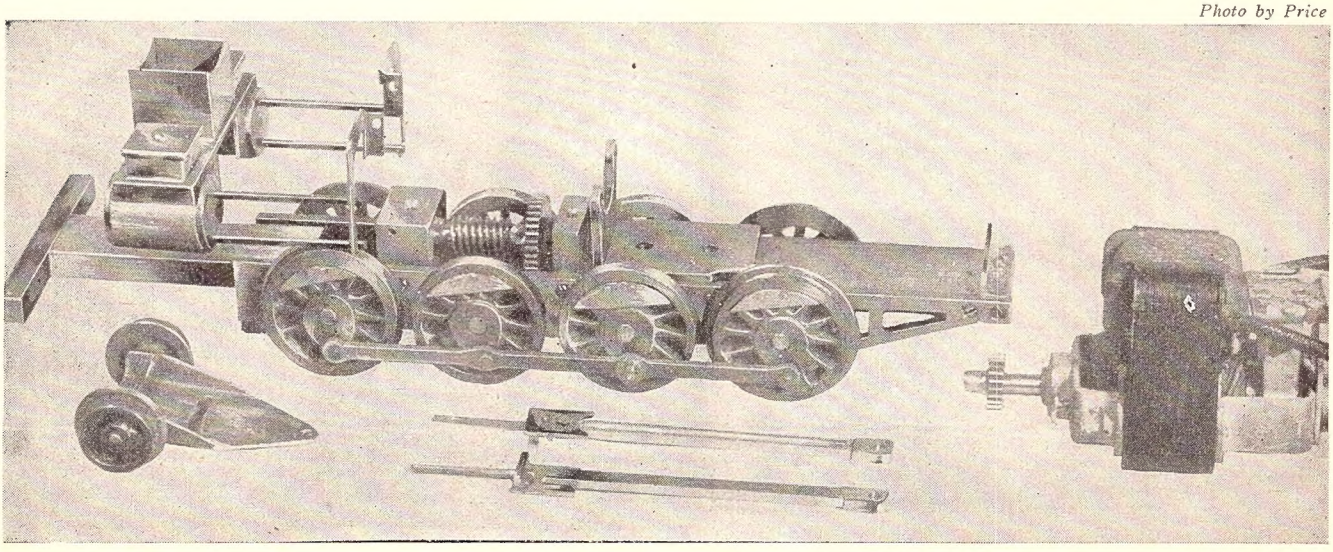
Following the perspective drawing, lay out one side of the main frame on a piece of ⅛" x ⅝" cold rolled steel. Scribe vertical center lines of the axle bearings, squaring these lines across top and bottom edges. Now make up side rod blanks from 1/16" x ¼" brass. Carefully mark out crank pin centers on rod blanks, using same divider settings as you mark out axle centers on the frame. Mark either the front or back ends of each blank so that the right end will come up when being applied. Mine are always marked *R* & *L* at the front end, using punch stamp letters. Previous to acquiring these stamps, three center punch marks in *L* shape were used to indicate *left* and four marks in square formation for *right*.

With all hole centers and finish lines marked out, clamp the one side frame to another piece of similar material. Top and bottom edges must be even. Using a drill press and drill vice, if available, drill #43 for all bolt holes. Use 2-56 bolts and nuts in the first three or four holes drilled to help hold the frames together. Drill 5/16" for axle bushings.

Now cut and file the frame to the finish lines. The cut-out at the back end is not essential but will show. This can be made by drilling a series of holes and then filing to finish lines. The side frames can now be taken apart and all bolt holes counter-bored with #27 drill about half way through or 1/16" deep, to permit fillister head iron screws to set flush.

Use 3/16" x ¾" brass for the spacer block at the back end. Set the finished frames with top hard on drill press or saw table or surface plate. Short pieces of drill rod placed through the axle holes will assure positive alignment. Set the spacer in position also hard on surface plate and clamp solidly. Using bolt holes in the frame as guides, start with #43 drill to find the centers, then drill #48 and tap 2-56. Set the 2-56 x ¼" fillister head iron machine screws in tightly and remove the clamps. For the front ex-

Photo by Price



tension, ¾" square brass tube is preferred over channel as it will not spring. Set a piece of the tube between the front ends of the frame, with frame top on surface plate and a 1/16" spacer under the tube. Clamp together, then drill, tap and bolt as for rear spacer.

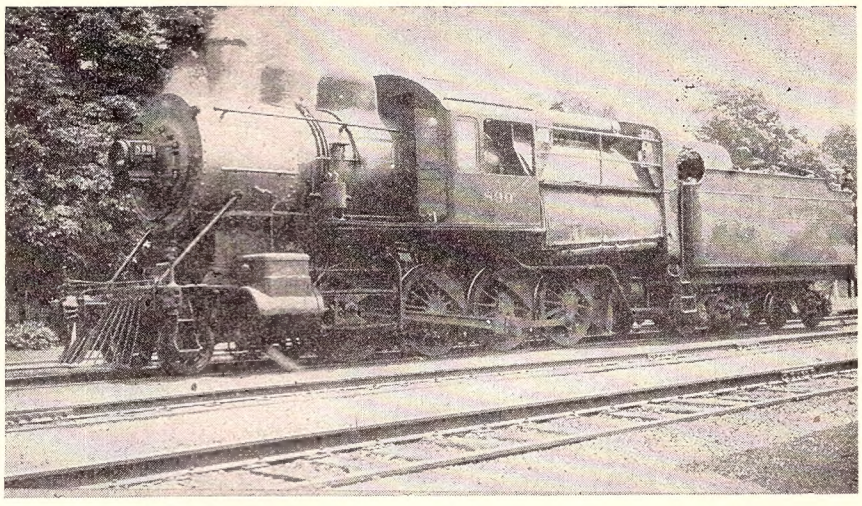
Lay out centers and finish lines of the cylinder bolt and engine truck center pin hole. Drill #43 for the cylinder bolt; for engine truck center and draw bar drill #48 and tap 2-56. Saw and file to finish lines. The breast beam is made of ¼" x ¼" brass and should be marked and cut out for the coupler pocket. Use a piece of 1/32" x ¼" brass as a carrying iron across bottom of the pocket. Secure this with 1-72 machine screws tapped into breast beam. All screw holes in the beam are 1-72 (drill #53 for 1-72 tap); solder to frame.

The bearing blocks are cut from ¼" x ¾" and ½" x ¾" brass. If no drill press vise is available, these should not be cut to length until the shaft hole is drilled. This will give you something to hold, for twist drills have the bad habit of catching in brass if you're not careful.

Use either 3/16" or #13 drill rod, whichever is available, for axles and worm shaft. Axle bushings may be turned from brass stock to a press fit in the frame. These must be bored to suit the axles and permit free running. Use the bearing stock as spacers and press home in the vise.

Place the driving axle in position with worm gear in place. Put the worm shaft through bearing blocks with the worm installed. Now put bearings between the frames and locate to give a free running but not sloppy mesh. Clamp over the frame to hold blocks in place, then drill, tap and bolt as for the other frame spacers. The excess bearing stock can now be cut off and the oil holes drilled. Ream out the burrs with a drill through the shaft holes.

To assemble the drive, you will need a #2 K&D motor, a thrust bearing (Boston #A01) and a ⅛" steel ball (ball bearing). Cut the shaft to extend about 1/16" out of the rear bearing. Grind the ends off squarely, and round the edge to remove any burrs. Insert the ⅛" ball in the front bearing, then push the shaft through back bearing, putting in place the



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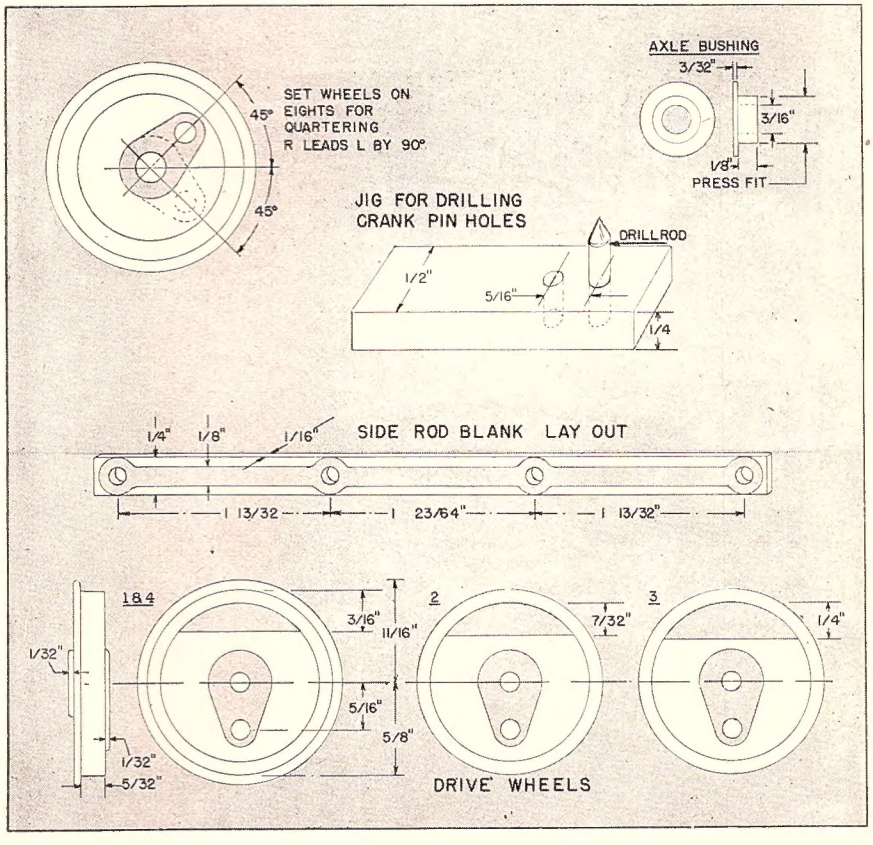
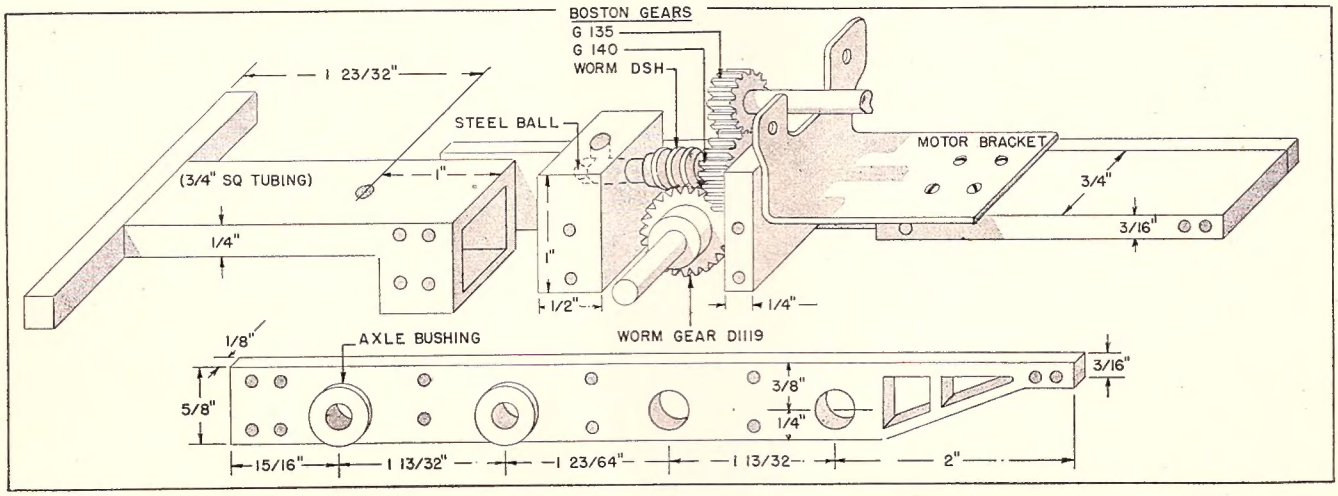
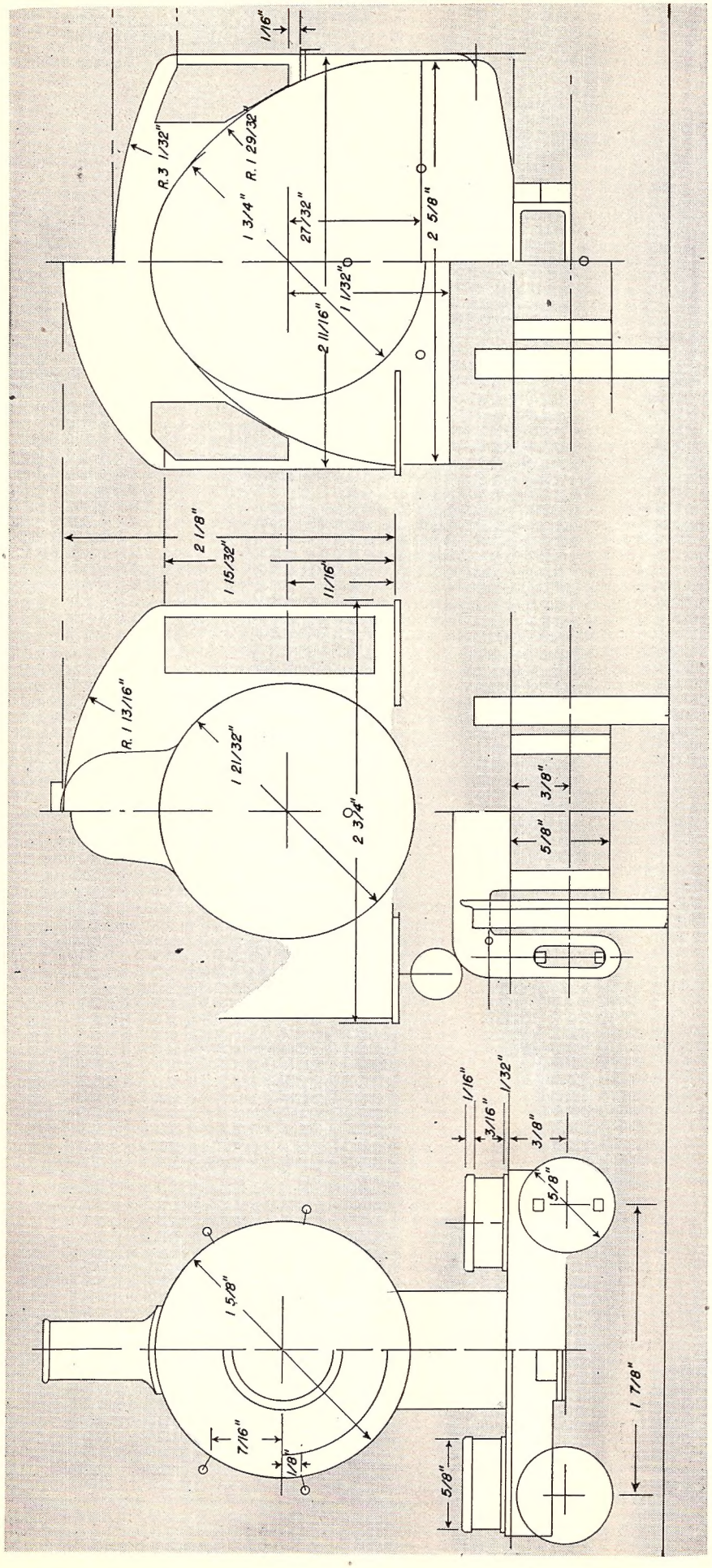
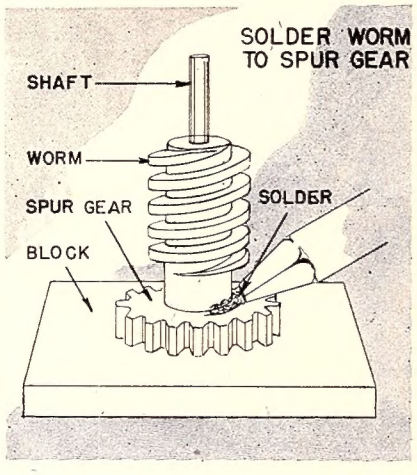






thrust bearing, the large spur gear (#G140) and the worm. If the gear fouls the worm, remove the steel washer and allow the gear to bear against the balls of the thrust bearing. Now scribe the hole in worm hub onto the shaft and remove. Drill through the shaft #48 to clear 1-72 screw. Solder the gear to the worm as follows: Drill a hole partly through a flat wooden block slightly larger than shaft size. Use another piece of #13 drill rod as a jig and rub on it a film of machine oil. Place the spur gear onto the shaft and set in the block, plain side down. Now add the worm and press firmly to the gear and solder, allowing a fillet to remain. The oil does not always prevent soldering to the shaft. If necessary, knock out the shaft with punch and hammer with the gear solidly set on a bench block. The sketch shows how to



set up for soldering. This set-up can be finally assembled, omitting axle and worm gear.

The motor bracket is made next from heavy brass angle to dimensions shown in the sketch. Secure it to the frame spacer with two or more machine screws. Now put the motor in place using short screws which will clear the armature windings. Slide the small spur gear (G135) onto the motor shaft to ascertain its proper location and solder in place. The ¾" height dimension to center of motor shaft is short by about 1/64". Spring the bracket to locate the gear. For the final assembly use a shim of any available sheet metal under the bracket to permit a free running mesh of the gears.

For the driving wheels, a fine grain soft grey iron casting is practically a *must.* Substitutes have been used with varying degrees of success. If ready machined wheels are to be used, their dimensions will have to be considered when making cylinders and guide yoke, etc. Of necessity, machining the wheels is a lathe job. Castings are generally furnished with a chucking boss at the back. Chuck the wheels so they run as nearly true as possible. Turn the tread, and face the tires and hubs. (Only #1 and #4 drivers have flanges.) Using the center drill in the tailstock chuck, start the center. Drill through #20. Now using the drill, ream out to #14 if you use #13 drill rod for axles. (#13 if you used 3/16" axles.)

When drilling the crank pin holes, make up a jig of cold rolled steel as indicated

in the sketch. The piece of drill rod should be the same as the machined bore of the wheels and should be a tight press fit and set tightly in the jig body. For lack of proper size drill rod, saw off the end of a twist drill shank. The guide hole (for 2-56 crank pins) should be #43. By inserting the stud in center hole of the wheel and drilling through the jig hole, all crank pins will have exactly the same throw. Start to a depth of 1/32" with the #43 drill, then drill through #48 and tap 2-56. Use a flat block of wood on the drill press table with a hole to clear the hub so that the tire sets evenly on the flat surface.

Turn the wheel face down on the block. With a #13 or 3/16" (axle size) drill open the center hole to a depth of 3/16", leaving 1/32" at the outside to the smaller bore. The full size hole acts as a guide and the under size as a press fit when pressing wheels on the axles. It will be seen that with 1" over the frames plus two bushing shoulders of 1/32" and two wheel hubs, each 7/32", the axles will have to be 1 9/16" long. Cut these slightly longer and then grind or file to length. Clean off the burr and slightly round the edge to prevent cutting. One wheel may be pressed on each axle. Use the vise for this, preferably with soft copper jaw protectors.

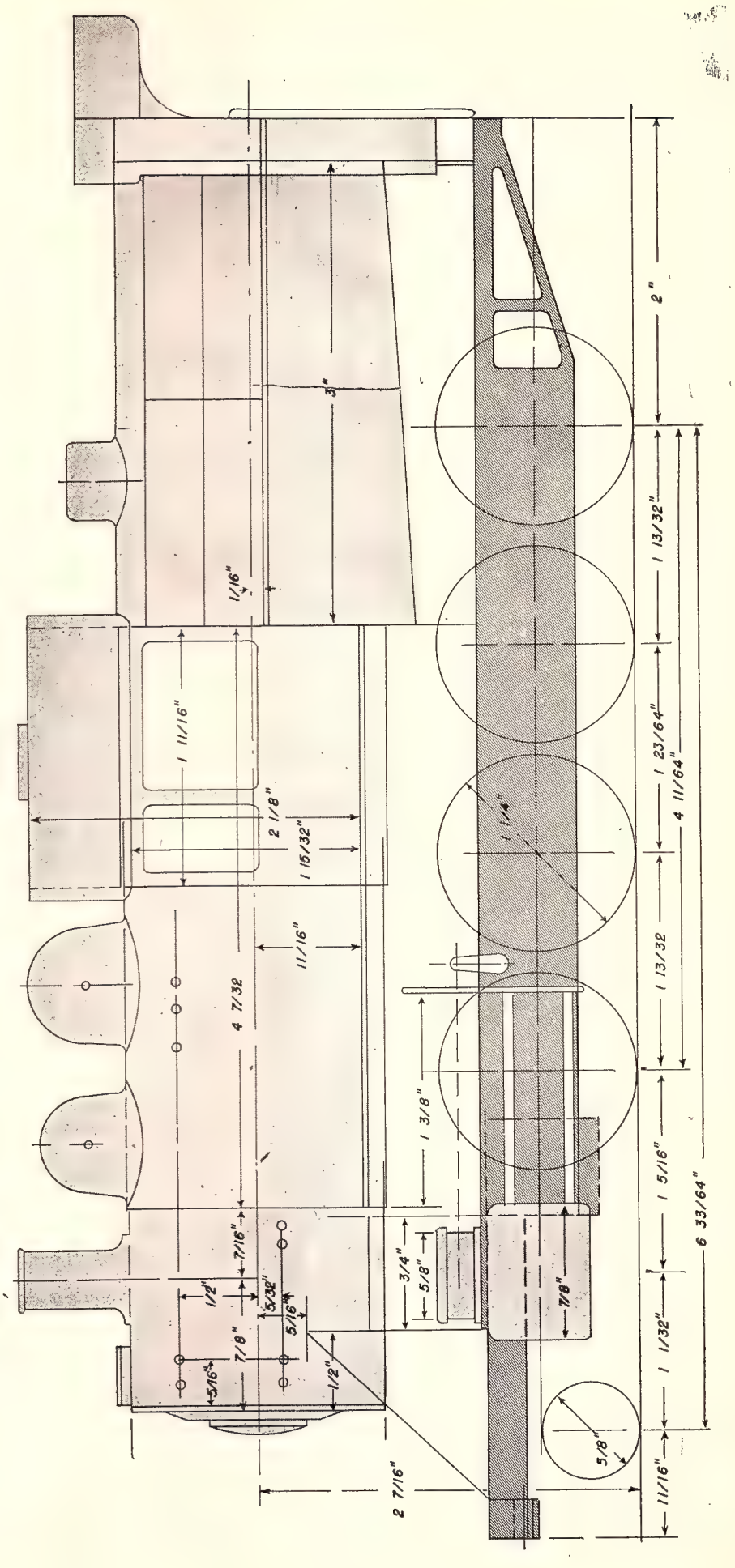
Next comes the crank pins (see sketch). If substitution is necessary, rods may have to be altered to suit. Length of the threaded portion should be 1/8". Shoulder of the #3 crank pins should be long enough to freely clear side rods, main rods, and spacing washers. The other pins should be long enough to clear side rods and washers.

Drill the worm gear hub #33 and tap 6-32 for set screw. Place #2 axle in frame bushings with worm gear located for proper mesh. Mark where set screw will come and remove. File a slight flat to receive the point of set screw and then replace. Set the wheel at the eighth position (see sketch) then put the other wheel on at 90° or a quarter turn. This does not have to be too exact as a difference of 10° will not be too great. Press this wheel on the axle. Now lay out finish lines on the side rod blanks as indicated. Drill crankpin holes #38 and ream with #35 drill (for crank pins .110" dia., if substitutes are used, alter accordingly).

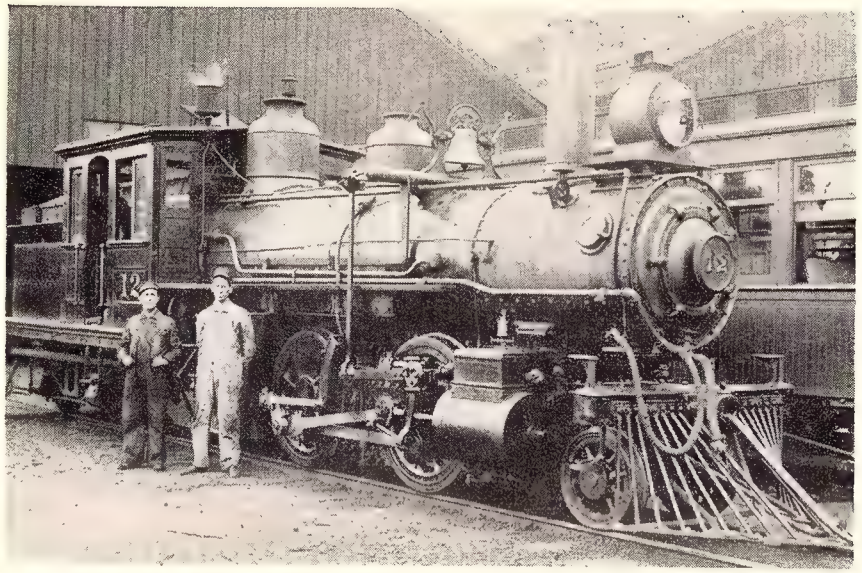
Put crank pins through their proper holes in the blanks and screw tight in wheels. Put another axle in position; place crank pin to line the wheel. Now put on the loose wheel and bring it in line with its crank pin. You may now start to press this wheel on in the vise. Be very careful only to start it as the hub is only partly in the vise. Remove the rods and press the wheel in place. Repeat for the other wheels. The holes in rods may now be opened out one or two drill sizes to a free running fit. File to the finish lines and replace, using thin washers between #1 and #4 wheels and the rods. This is done so the rods will not scrape paint off the hubs when running.

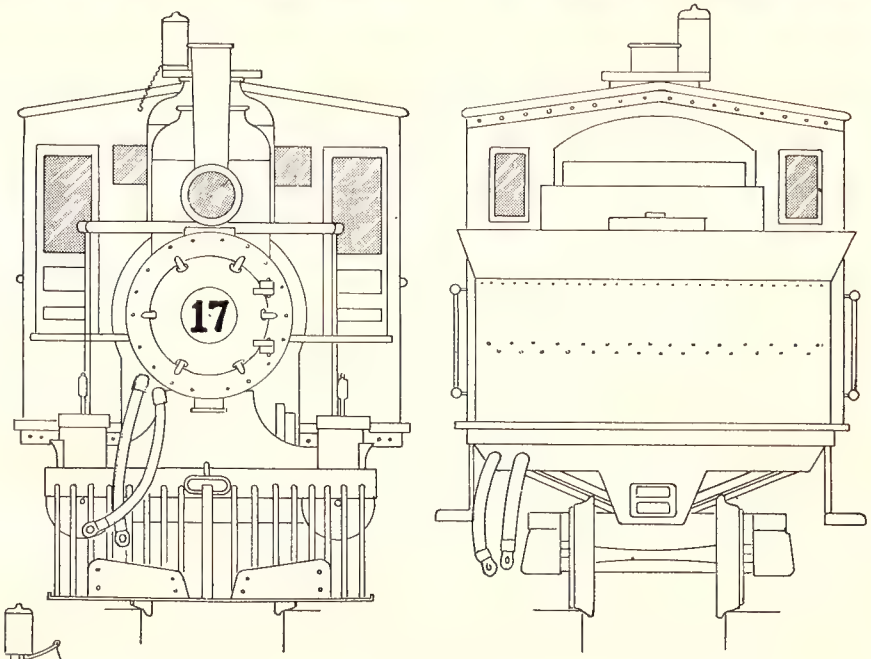
Set the frame up on blocks and run in the bearings. Use light grease on the gear teeth and light oil on the bearings.

(Continued next month)



NARROW GAUGE TANK LOCO

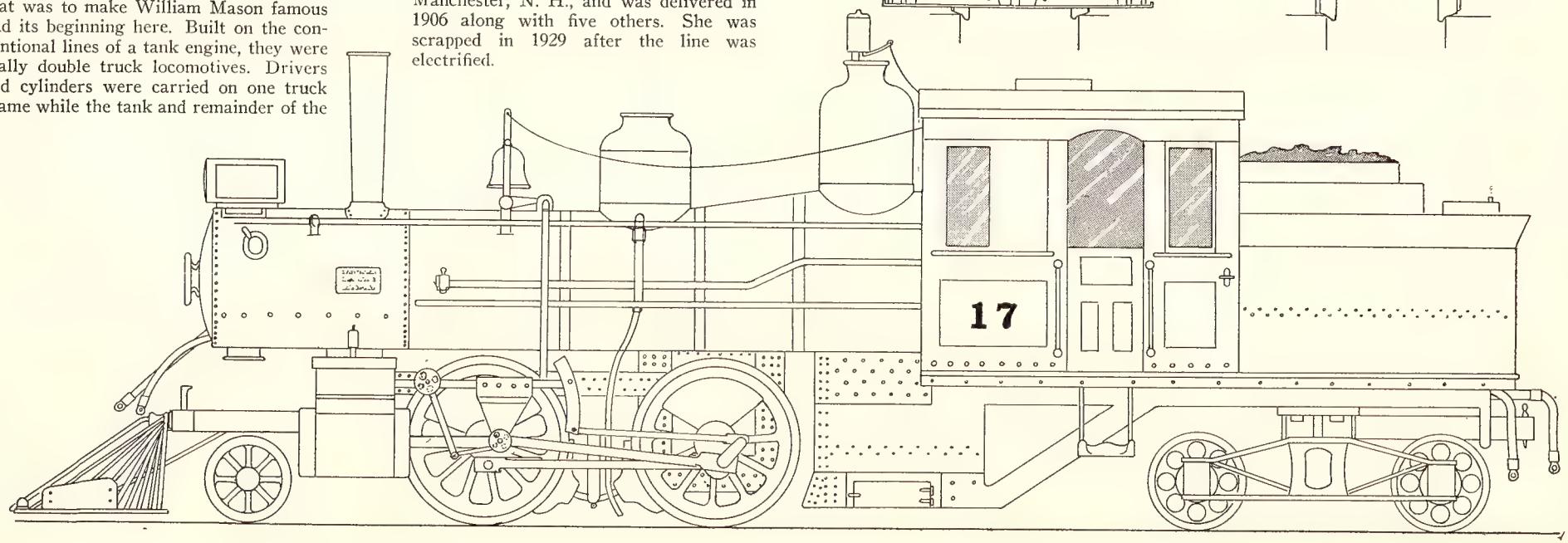




By W. H. BUTLER

IN THE year 1876, Boston Revere Beach & Lynn Railroad began using a new type locomotive. The bogie tank engine that was to make William Mason famous had its beginning here. Built on the conventional lines of a tank engine, they were really double truck locomotives. Drivers and cylinders were carried on one truck frame while the tank and remainder of the locomotive was supported by the usual tank truck.

Prototype of these plans was built by the Manchester Locomotive Works of Manchester, N. H., and was delivered in 1906 along with five others. She was scrapped in 1929 after the line was electrified.



YOUR NABOR'S PIKE

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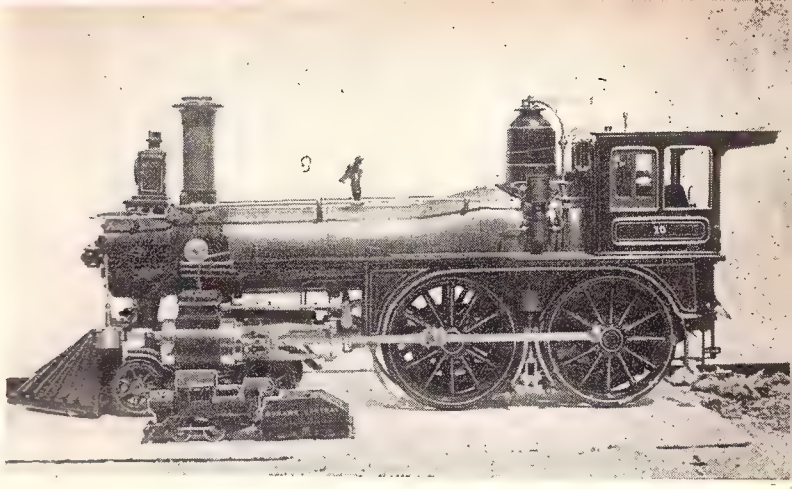
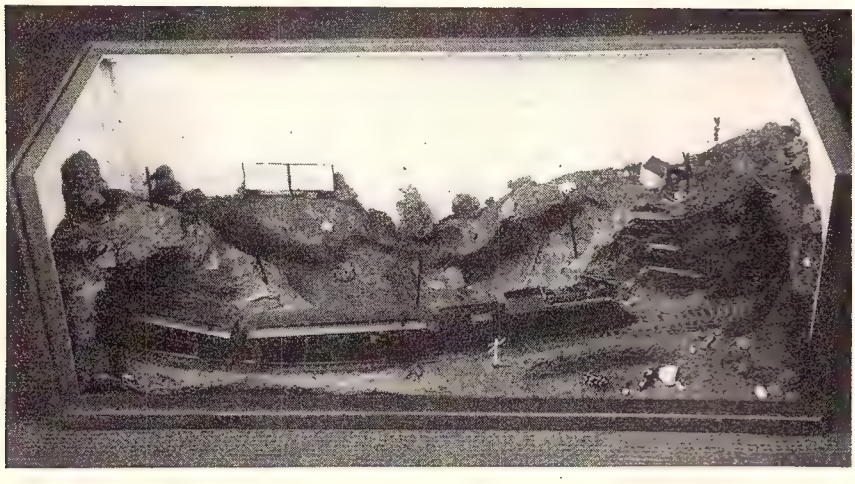


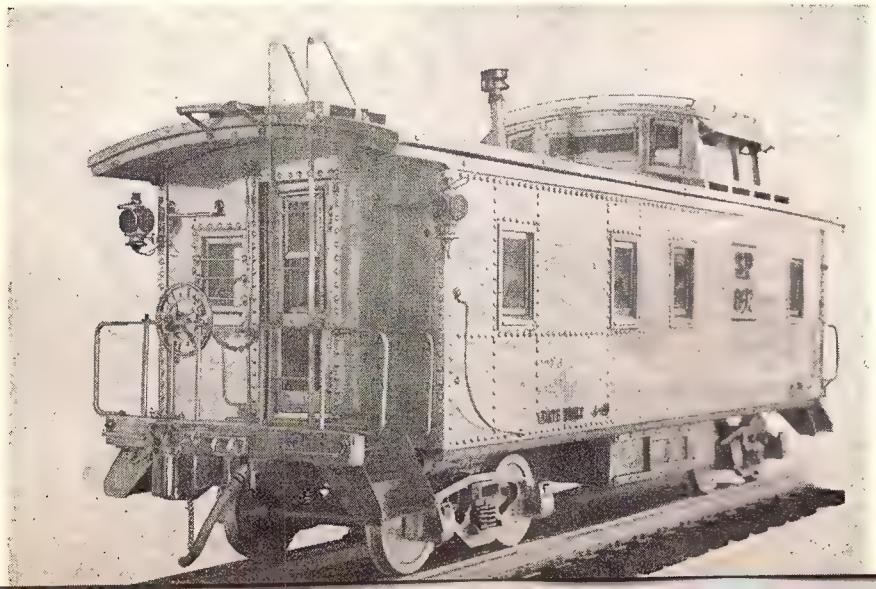
Photo by Carstens

GRANDPAPPY model built in 1870 by William Johnson, of Newark, N. J. Prototype is Pennsy #10, which was outshopped in 1875 from their Altoona Shops. Model is full working, including valves which turn, working brake shoes and headlight—truly remarkable for a 75-year-old locomotive. This model is now owned by Warren Ring, of Grantwood, N. J., and Warrie can't figure out why the model was built five years before the prototype!

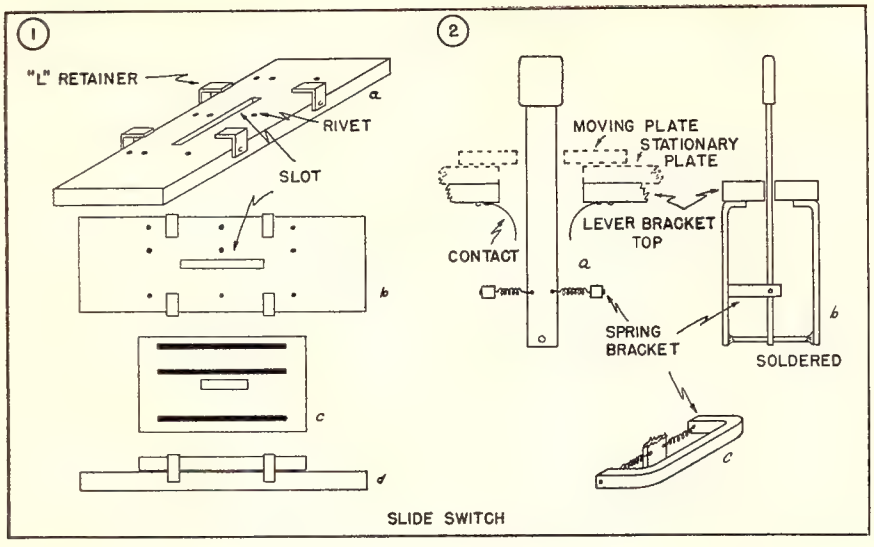


DIORAMA recently completed by Jack Knott, of Columbia, S. C. A real slick job, measuring 30″ x 12″ x 10″ in size. Jack claims he used the usual construction methods but has turned out a most unusual job. Wooden forming blocks, screen wire, Tex-Tone and domestic plaster were his materials. Painting was done in oils.

BIG TOP William R. Brinley, 143 Miller St., Meriden, Conn., has always wanted a life-size circus of his own. And he has come pretty close to it with this ¾″ scale model which has taken him 20 years to complete. Every piece is hand made, including 12 tents, 45 wagons, 14 railroad cars, 150 animals plus all his equipment. Wagons load exactly like the real ones, complete with brakes, drag shoes, removable pole, drop food boards and full detail.



SUPER DETAILED Jack Fesco, of Los Angeles, Calif., spent over 4,000 hours building this deluxe ¾″ scale model of a Southern Pacific all-steel caboose. Declared a marvel of mechanical perfection by many railroad men, this model weighs 30 lbs.; is 11″ high, 30″ long and 7½″ wide. No castings were used on this model, entirely hand made except for wheels, journals and marker lamps which were turned out on a lathe. The hand brakes actually work, marker lamps light and all working parts function!



SLIDE SWITCH

Interlocking Without Relays

By L. W. LAWRENCE

INTERLOCKING, that labor saving, safety feature of prototype railroads, is a subject often shunned by the model rail fan primarily due to the prohibiting cost of the required apparatus. If you have ever seen the relay board of an interlocking tower, you will have some idea how intricate this practice may be. Even on the model pike, banks of relays are required for most circuits given in interlocking handbooks. At three to five bucks apiece, the owner of a fair-sized pike must either forego the fun of interlocking, or sink a small fortune in relays.

When planning my own pike, a rather extensive interlocking system was desired, to serve two purposes. First, interlocking adds a considerable safety factor to the model pike. Where the layout consists of roughly thirty or more sections with over twenty track switches, it is very easy to have a track switch occasionally set against traffic, or perhaps have two trains running in opposite directions on the same rail. Wrecks are costly—even model ones! With a good interlocking system, the number of wrecks due to wrong routing, leaving switches against traffic, mis-timing meets at crossovers, etc., are minimized, if not obliterated. My second purpose for installing this system was to authenticate signaling. It looks quite silly to see a train going 60 scale MPH, clip by a *red board!* I figured that if signal lights do not actually control the train, they are not worth the trouble of installation. On my pike, a train will not pass a red light until the board turns green! So with these two purposes in mind, I began to figure how to "beat the rap" by eliminating as many relays as possible but still have a working interlocking system.

Principal parts of the mechanism, developed to take the place of relays, are shown in Fig. 1 and 2. Throughout this discussion, we'll refer to this as a "slide switch." We have purposely omitted detailed drawings, since the working principle of the switch can be employed in many ways, accomplishing a variety of jobs. Your ingenuity is called upon for application of the switch to your needs.

In Fig. 1-a, a thin block is shown with a longitudinal slot cut through it. Four "L" shaped retainers are fastened to its sides. Set into the block, flush with top surface, are nine flat-headed rivets. Dotted lines indicate leads soldered to the underside of the rivets and extending out the bottom of the block. Fig. 1-b shows top view of the block. A smaller, thinner block is inlaid with three strips of brass, Fig. 1-c. This block also has a slot cut through it, but shorter than the slot in the larger block. Fig. 1-d illustrates the assembly of this unit, the smaller block slide under the four "L" retainers of the large block. The smaller block is now free to slide back and forth so that the inlaid brass strips alternately connect the rivets at opposite ends of the large block with center rivets. Thus current can flow throughout appropriate sets of rivets to complete any circuit desired. Hard rubber or bakelite is recommended for the two blocks, brass of appropriate gauge for the retainers and nickel-headed rivets.

Use care when mounting rivets and brass strips to insure positive contact. Allow the rivets to extend just a hair above the block surface to obtain good electrical contact. A spring arrangement between retainers and the sliding block may be employed to keep the small block pushed tightly against the other.

The lever mechanism for the slide switch is shown in Fig. 2. It consists of a metal frame supporting a lever which is held in neutral position when not in use by two light springs. The lever is shown in Fig. 2-a, with a spring on either side maintaining it in upright (neutral) position. The lever projects up through three slots and is surmounted by a handle. The lever bracket top (solid lines) supports the stationary plate or block of the slide switch. The sliding block rests on top of this. (Slide switch shown dotted.) On the under side of the lever bracket top, two contacts are shown, consisting of strips of spring brass so adjusted as to alternately contact the lever. Thus a current may flow from lead 3, through the arm, to either lead 1 or 2. The bracket securing the two springs is shown in Fig. 2-c and is fastened (screw or solder) to lever bracket, Fig. 2-b.

Strap brass is recommended for the lever, lever arm and spring bracket; hard rubber for the lever bracket top piece and handle. Any small spring of suitable tension may be used, those secured from inner tube valves proving satisfactory.

As for working principle of slide switch, when the lever is pushed to the left (Fig. 2-a) it contacts the spring contact to complete a circuit. If connected to a switch machine, it throws that switch in a pre-determined direction. When released, the lever returns to neutral position. When the lever was thrown to the left, however, it forced the moving section of the slide switch to the left. This movement set up certain combinations of circuits which will be used to juice the signals protecting the track switch just thrown. Note that even though the lever has returned to neutral, the slide switch remains in position due to the leeway allowed by the longitudinal slot. The only way the signals can be changed is to pull the lever to the right. The slide switch will be forced to the right, setting up new signal indications, at the same time the momentary contacts throw the track switch back to its original position.

Once you have constructed a working model of the slide switch, we suggest standardization. Make all switches alike. You can then arrange them in banks for a neat appearance. Here we might note that it is possible to incorporate the slide component with a regular toggle key, but they, too, cost money and our main purpose here is to *save!*

Let's take a look at the slide switch used in some interlocking diagrams. A simple turnout is illustrated in Fig. 3. Details of insulation around switch frogs has been omitted as no variation of the usual practice is required. The diagram does indicate two rail insulation of each section in accordance with plans of the Master Control Board described last month. If you are not using this system, no changes in the interlocking circuits are necessary.

Tracing the main pair of tracks from the left, we note one of them has a

length of rail (x) on one side insulated from its continuation on both sides. Length of this rail section should be sufficient to stop your fastest moving train when that rail is dead (six-inch minimum suggested for HO). On the other track joining the straight away at the switch, a similar "controller rail section—CRS" (x') is shown. These CRS are coupled with the signal equipment through a slide switch and are the components of the circuits which make your trains obey the boards.

These circuits operate as follows: Each CRS is connected by a jumper circuit to the adjoining rail of its section. If the jumper circuit is complete, current flows through it to the CRS from the adjoining rail (current to entire section is coming from control board). When the jumper circuit is open, the CRS is "dead" and a train coming upon it will stop even though the balance of the section has power. To move the train across the CRS, the jumper circuit must be completed.

In Fig. 3-a, the slide switch is shown diagrammatically. Fig. 3-c shows the moving plate with three parallel inlaid strips. Solid lines in Fig. 3-a indicate the position of these strips and dotted lines the alternate position. Note here that the inlaid strips of the moving plate contact the middle row of contact points (rivet heads) in *either* position. This particular slide switch accomplishes identical results of a TPDT knife switch, although the latter *cannot be substituted.*

Assume that when the lever of the slide switch is pushed up in the diagram, the track switch is bent and the inlaid strips are making the contacts shown by solid lines. Now trace the circuits which are completed, beginning with the jumper circuit to CRS(x'). CRS(x') is alive, getting its current from its adjoining rail. CRS(x) is dead, stopping any train coming upon it—thus saving a wreck at the switch.

Signals are then set as follows: A—red, B—green, C—yellow. (Signal C faces *against* traffic and is installed primarily on tracks having "with" and "against" traffic movements. It has two aspects: green—straight switch, and yellow—bent switch.) If you have a control board showing your track diagram, indicator lights mounted as in Fig. 3-b are recommended. White light means straight switch; yellow light bent switch.

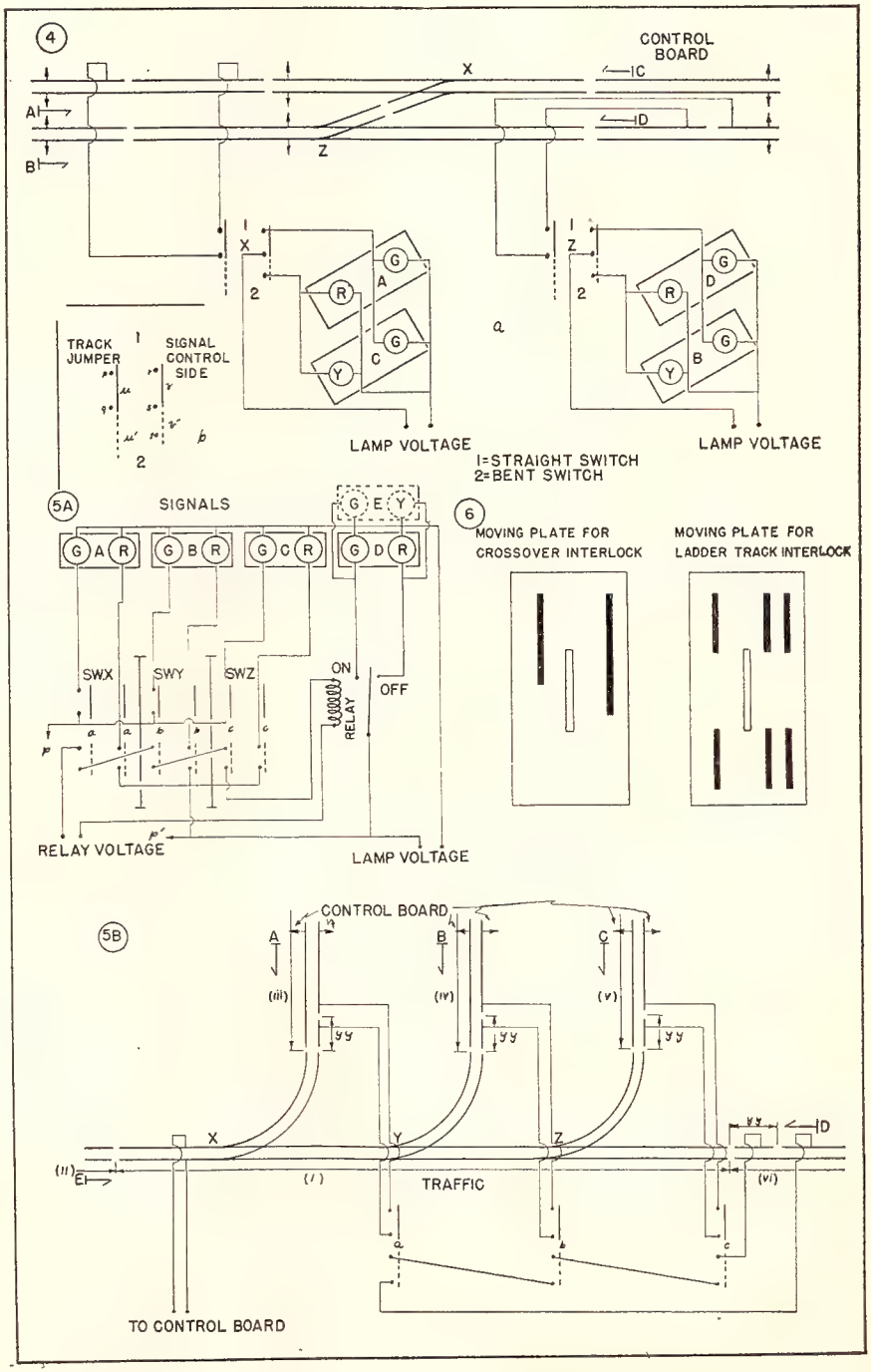
To set the track switch straight, you must now pull the slide switch lever *down.* By so doing, you actuate the switch machine which changes your switch. You also force the sliding plate down and set up the contacts indicated by the dotted lines changing all signal aspects as follows: Signal A—red to green, (CRS(x') is now dead, CRS (x) alive). Signal B—green to red, signal C—yellow to green, control board indicator—yellow to white. This is the interlocking plan for the simple turnout. No relays were used, yet we accomplished complete safety protection.

Fig. 4 illustrates a little more complicated application of the one just mentioned. A point to note is the complete insulation at crossover. This is necessary to avoid shorts when using the master control board. Working principle is as follows: Signals A and C protect track switch "X" and are controlled by the slide switch "X." Signals B and D are coupled with track switch "Z." Interlocking of this unit, as shown, does not in itself afford protection if track switch X is *bent* and Z is *straight.* Protection in such a case can be had by coupling the switch machines so they act together. Only one slide switch is then required, the signals being coupled in pairs.

The moving plate of the slide switch is different for this unit. Inlaid strips are shown in Fig. 6-a, so arranged that when plate is in position 1 (Fig. 4-a) connections indicated by solid lines are made (Fig. 4-b, "p-q" made by strip "u," "r-s" by strip v). Position 2 makes connections indicated by dotted lines (Fig. 4-b, u' makes no contacts, v' makes connections "s-t"). The signal aspects are in the following combinations: Track switches X and Z straight (through traffic), signals A, B, C and D—green. Switches X and Z bent for crossover, signal A—red, B—yellow, C—yellow, D—red. If one switch is bent (i.e., X) but switch Z is straight, only partial protection is rendered. Full protection is given by the coupling of the switch machines as noted before. The separate operation of the track switches has been diagrammed since such a system will sometimes be advantageously employed.

Fig. 5 is divided into two sections, the track jumper circuit and the signal control circuits. Remember, however, that these two diagrams represent a single unit. The slide switch moving plate to operate the signal and track jumper circuits is diagrammed in Fig. 6-b. Note by dividing the entire diagram into sections necessitated the division of the point

(*Continued on page 48*)



Combination Station

By JOHN KEMP

THOSE of you looking for a combination freight and passenger station that is just a bit out of the ordinary yet along standard railroad lines, should be interested in this station. It provides separate buildings for each facility, but both are housed under the same roof. This setup is conveniently arranged for handling by one agent. LCL shipments can be transferred from the freight house to a waiting truck without exposure to the elements, thanks to the roofed platform between the two buildings.

As originally designed, this station was intended to fit on a narrow place on a shelf, between two tracks and the wall. This shelf was the terminus of the fabulous Reidmere extension on my railroad. This same extension cut off from the main line tablework across a yard-long bridge on an eight per cent grade, curved across a bureau top, arched across a window on a removable 33" through truss bridge, terminating with a long passing track at the town of Reidmere. The town was named for the British mechanism that was in the locomotive doing most of the hauling.

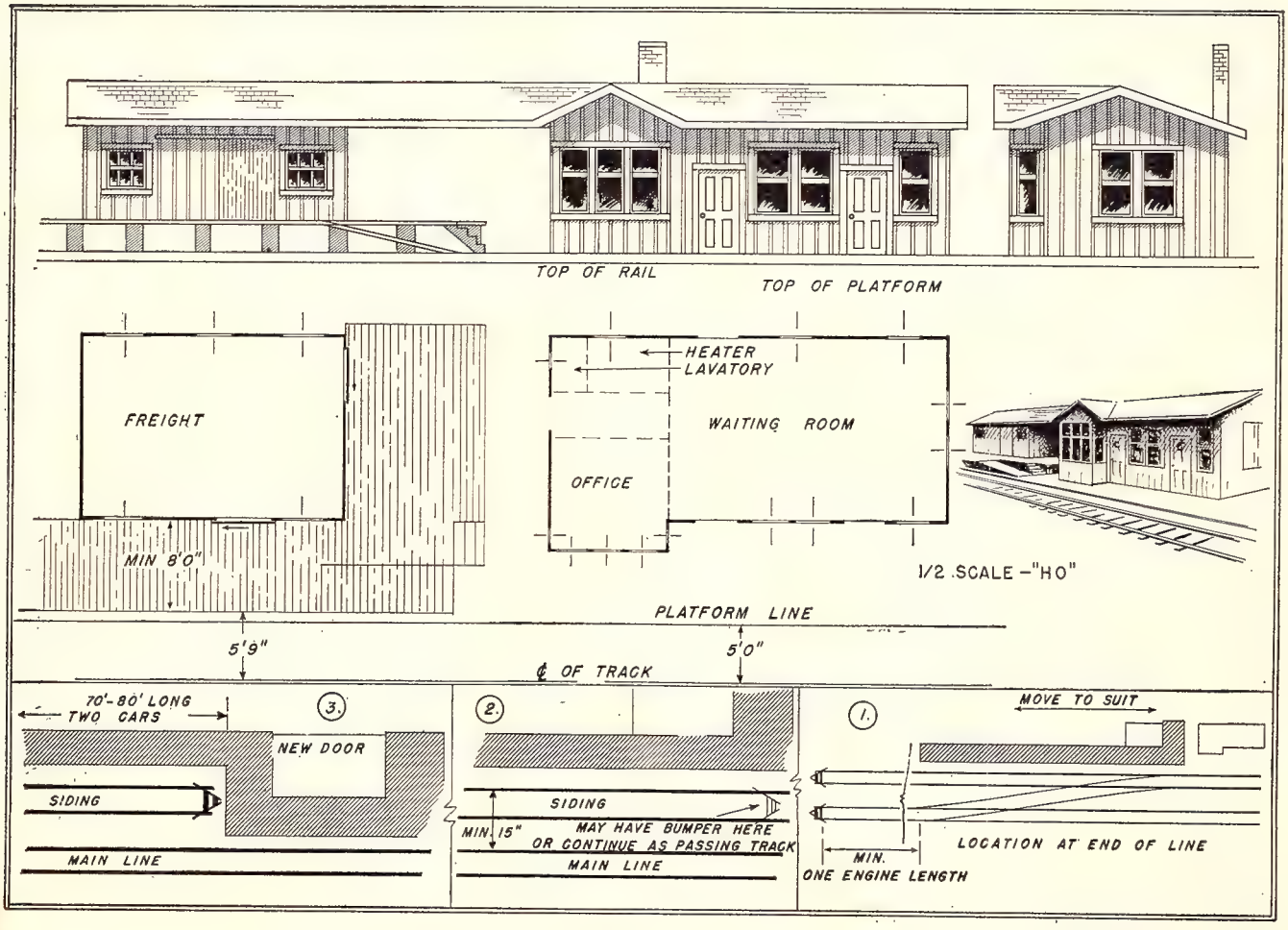
I started this station with the platform, which was ⅛" thick cardboard cut to shape with tin-snips. The edges were sanded well and the surface marked out for the buildings. Plywood would work well for the platform also. Sides of the two buildings were then marked out on bristol board, each building in one continuous strip. The freight house has the usual four sides, while the passenger depot has six. With all windows and doors cut out, all detail such as the sash, doors, etc., are cemented to the back. Now the sides were cemented to the platform in proper location. Walls were covered with medium grit sandpaper to imitate stucco. This was cut to fit around the windows, leaving room for sills, etc., which were affixed after the stucco to cover all remaining joints and cracks. Each side of sandpaper must be separate since it does not bend well around corners.

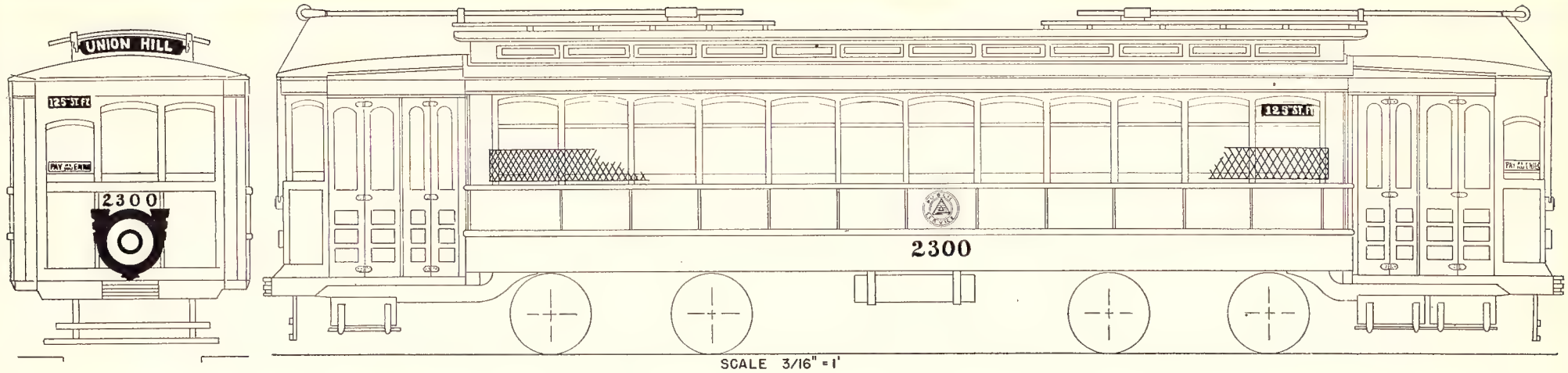
The next job is painting windows and door trim and stucco sides. Use a gray or yellow or possibly leave the model the plain sandpaper color. Glass in the windows and add any interior detail desired. The freight platform was supported on short lengths of ⅛" dowels. Platform was made from separate lengths of bristol board to represent individual boards. These were mounted on another piece of bristol which did not quite come to the edge. (This should not show.) The platform was finally stained with very thin black paint, with an occasional new board of unpainted bristol.

The roof was put on last in two pieces, the main long roof and the short hip over the agent's bay. Don't forget the stack on the roof over the heater room. Station signs and other details can be added to your own tastes.

Fig. 1 shows the station as originally located at the end of the long passing track. The cross-over between the two tracks served to escape the engine from the head of the train, back to the rear for the return trip. The short stub of the passing track provided siding space for the freight station. Fig. 2 shows how the station might be set out along the line with a siding or passing siding in front. When space permits, it would look better to set the station slightly back from the main line. If space does not permit even two tracks in front of the depot, however, follow fig. 3 and run one track in front with a stub siding running to an offset freight platform.

When constructing your railroad buildings, follow one color scheme throughout, as in general prototype practice.





Public Service 2300

By HAROLD CARSTENS

HERE we have an earlier type car than the 2600 which was described in December, 1943 M. C. Smaller than the 2600 type, the 2300 series cars were built by Brill in 1911 and were used extensively on the P. S. Newark Lines.

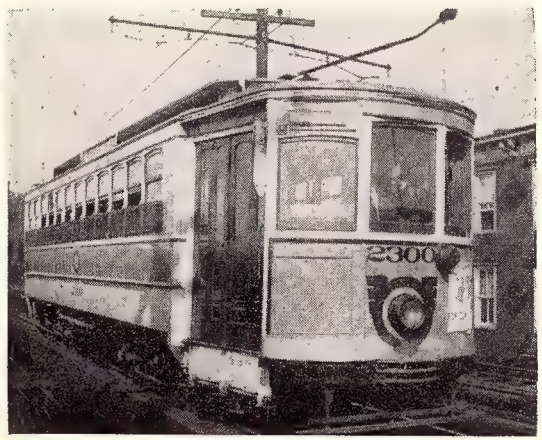
Public Service in 1911 was only eight years old. Older cars, from myriads of small lines consolidated to form P. S., were being scrapped and these were the cars which took their place. Later, as newer cars were ordered, this basic design was kept although the cars grew from 11 to 14 windows. Even the 2300 series were similar to still earlier cars. In fact, about the only cars not resembling P. S. were the 7000 series birneys and some arch roof cars which were numbered in the 4000's.

But getting back to the model. These were double entrance cars, seating 44 persons, with a total length of 32 feet. When new, the cars had large ugly wire fenders very much like those used by the Los Angeles Railway and San Francisco Municipal until recently.

Originally all double enders, Public Service converted many of these cars for single end operation. When accomplished, steps were removed from those doors which would no longer be used so that steps were only on the right side as in the drawing. For a double end car, we recommend putting all steps on the car. Double end cars were (and still are) being used on lines ending in loops.

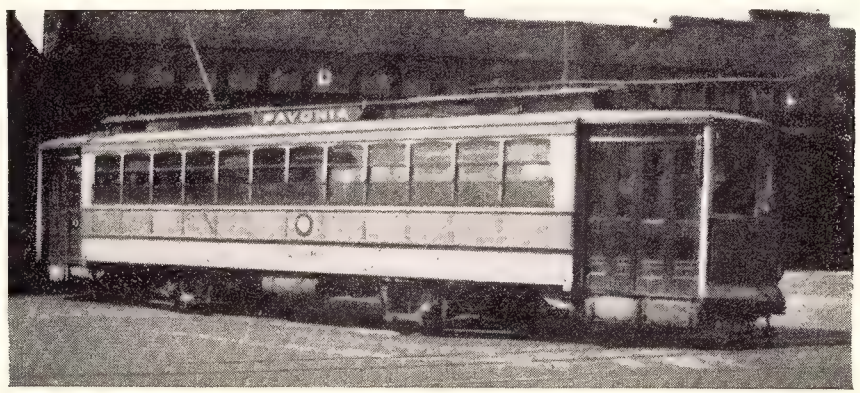
Aside from routine construction procedure, several details should be mentioned. On all older cars operated by Public Service, a painted route sign was used. Even in an HO model, these signs can be made to be removed. This is desired if you care to change route signs occasionally. It is a detail not often seen on model trolley cars and roll signs are a bit difficult to make, even in O gauge.

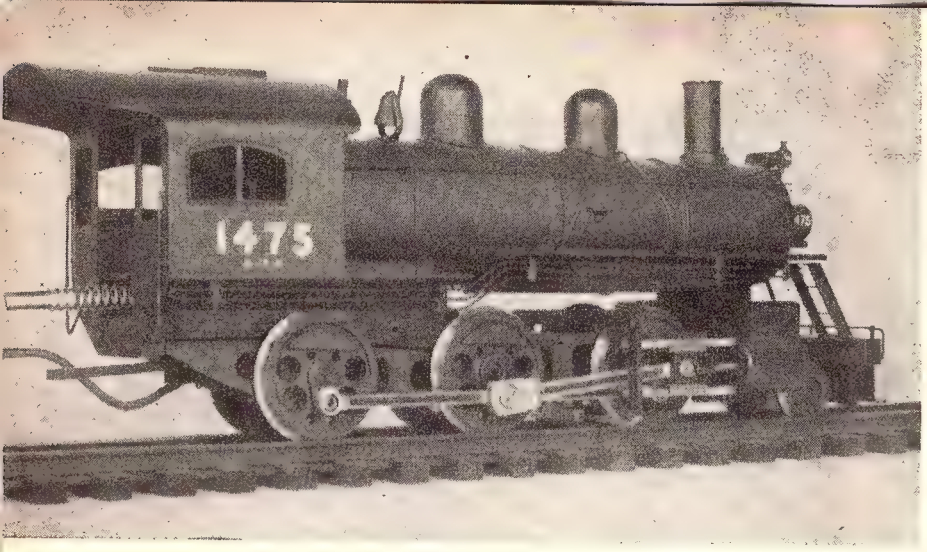
Color scheme for the car was something to delight any fan. Doors and window frames were red. The body was cream and orange. Color arrangement can be determined from studying the photos. Headlight, underbody, bumpers and poles were black, with either a gray or silver roof. All striping was in red as was the design around the headlights. The Public Service herald had a red triangle inside a blue circle with the letters PUBLIC SERVICE in gold. *Photos by Richard Young, Clifton, N. J.*



Public Service 2300 on Jersey City Elevated.

Public Service 2300 at Union City barn, March, 1938





Boston & Maine Mogul

PART THREE

By LEWIS AUSTIN

IN LAST month's issue, we completed the frame and running gear, so now we're all set for the boiler and cab. It is best to start with the boiler sections and build up the boiler. Sections are numbered 1, 2 and 3 on the plan. Section #1 is the smokebox, #2 is the tapered section and #3 the back end of the boiler and firebox. The templates are shown full size except for length, but full dimensions are included. All sections are cut to shape from 1/32" thick sheet brass and then bent around a piece of pipe or anything round to give them their approximate shape. Final shaping is done by hand. Note the smoke-box and firebox sections have the seam at the bottom after they are bent to shape. The tapered section has the seam at the top. The bottom of the tapered section is straight, the taper being only at the top and sides as indicated. Solder the seams of the boiler sections after they are bent to shape and file the ends of the sections square. The boiler should be in perfect alignment when the sections are stacked up. The sections can now be soldered together. In order to add strength to the boiler, solder 3/32" wide bands of 1/64" thick sheet brass around the boiler directly over the joints between the boiler sections. Clean off excess solder and file off any irregularities in the boiler that were made when sections were being bent to shape.

Marker light bracket is made from 1/16" sheet brass. File a slot across front of smokebox to fit bracket (see plan).

The boiler front is made up from 1/32" sheet brass discs (a casting may be purchased if preferred), consisting of four parts: the 1 3/8" diameter disc with rivets punched into its face; a slightly smaller disc, cupped to shape shown on plan; a still smaller cupped disc for the front, and the headlight bracket. Cupped discs are easily shaped by hammering them with the ball end of a ball-peen hammer. Once shaped, the hammer marks are filed off. File the three discs to their correct diameters and drill a 3/32" hole in center of each. The headlight bracket is then cut and bent to shape from 1/32" sheet brass. Drill a 3/32" hole in the end of the bracket and assemble boiler front with a 2-56 screw through headlight bracket and then through the three discs. Tighten nut on end of the screw to hold assembly and solder the boiler front together. Drill eight #60 holes around the smallest disc and insert HO gauge spikes to represent lugs which clamp smokebox door in place. Ends of the spikes are bent over and soldered securely in back. The boiler front is now completed and can be soldered to the boiler.

Turn the stack from brass rod. Do not drill the clearance hole for the 6-32 screw in the bottom of the stack but instead drill a 3/32" hole. File the bottom to fit the radius of the boiler and then drill and tap a 2-56 hole in the boiler. The stack can then be fastened to the boiler with 2-56 screw. Solder stack in place and remove the 2-56 screw. The hole at the bottom of the stack can now be drilled with a #27 drill as well as underside of boiler in line with stack. The 6-32 mounting screw can then be passed through stack and boiler and screwed into cylinder block.

The domes are also turned out of brass and drilled to make them lighter. Drill and file holes in the boiler to fit the domes, then solder them in position. Flow solder around the domes to form a nice fillet. Since the domes on the model are quite high, make certain they are mounted squarely on the boiler or they will spoil the appearance of the model.

The generator is shown by dotted lines on the drawing. Turn from brass and mount it on a small bracket bent to shape from 1/64" sheet brass. The bell and bracket can be purchased, however the bell on my model was turned on a lathe. The bracket was cut from 1/32" thick sheet brass and bent and filed to shape. The whistle is made from 1/8" diameter brass rod and filed to shape. Solder the whistle to turret dome. Two short pieces of 1/16" brass rod are soldered into holes drilled in the top of the turret dome to represent pop valves.

Build up the cab from 1/32" thick sheet brass. Templates are shown full size. Cut out the large piece consisting of cab roof and sides and then cut out window openings with flat chisel and clean up with file. Bend the roof to shape, taking care to get a very smooth bend. Now cut out front and rear of cab and fit to cab roof and sides. The hole located in the front of the cab should fit the shape of the firebox. When all parts fit nicely, solder the cab together. Cut out window sash from 1/32" sheet brass and solder behind window openings. The hatch on the roof of cab is filed out of 1/16" thick brass and soldered to the cab roof. Make up rain gutters from 1/16" wide strips of 1/32" thick brass and solder to cab roof.

Before soldering the cab to the firebox, mount the boiler on the loco chassis with a long 6-32 screw through the stack and smokebox. This will hold the boiler in its correct position on the chassis. Hold the cab in place on the firebox and mark the two mounting holes in the rear of the loco frame. Drill and tap the holes for 2-56 screws and mount the cab in place on firebox. Make certain the cab lines up square with the boiler and firebox and solder in place. The boiler and cab can be left on the chassis.

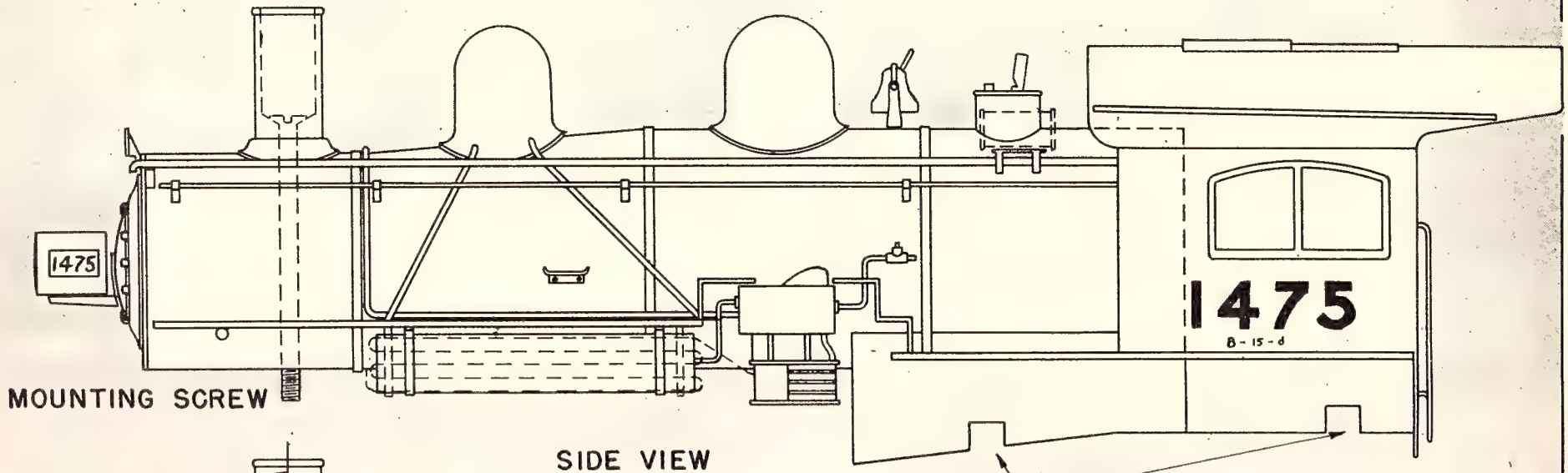
Running boards are made from 1/16" thick sheet brass, and the small steps that pass over the air pump are made from 1/32" thick sheet brass. Solder running boards in place while boiler is mounted on chassis so they can be checked to make certain they are level. Remove boiler from loco chassis and solder small angle pieces made from 1/32" sheet brass under running boards to support them.

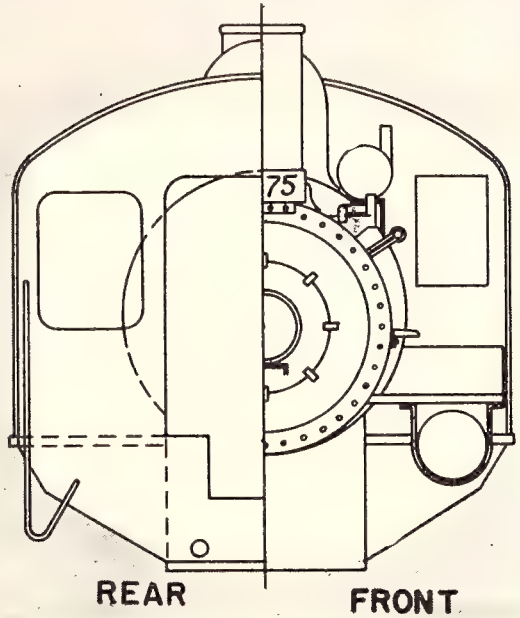
Mount the air pump casting on a bracket and fasten to the boiler. The headlight is turned from brass rod and drilled out. Solder a small piece of 1/32" brass to each side of the headlight for the number board. A piece of celluloid is pressed into the front of the headlight to act as a lens, and the headlight then fastened to the bracket with a 2-56 screw.

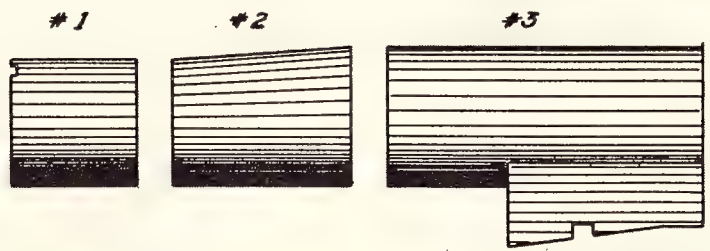
A number board is also mounted on top of the boiler front. File this to shape from a small piece of brass and solder in place. All piping is made from 1/32" brass or steel wire with exception of the large conduit pipes that carry the wires to the headlight on the prototype. This pipe is made from 1/16" brass rod. Two 3/8" diameter tanks are mounted under the running boards, one on each side of the boiler.

The locomotive is now complete and ready for painting. Use a flat black to give a realistic appearance. Lettering was put on with white drawing ink and the entire model then given a coat of dull varnish to protect the lettering. Next month, we will explain the tender construction to complete your model.

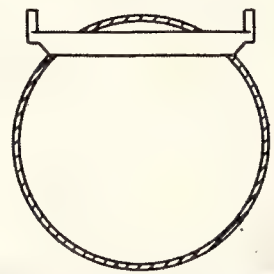
BOSTON AND MAINE MOGUL
"O" GAUGE





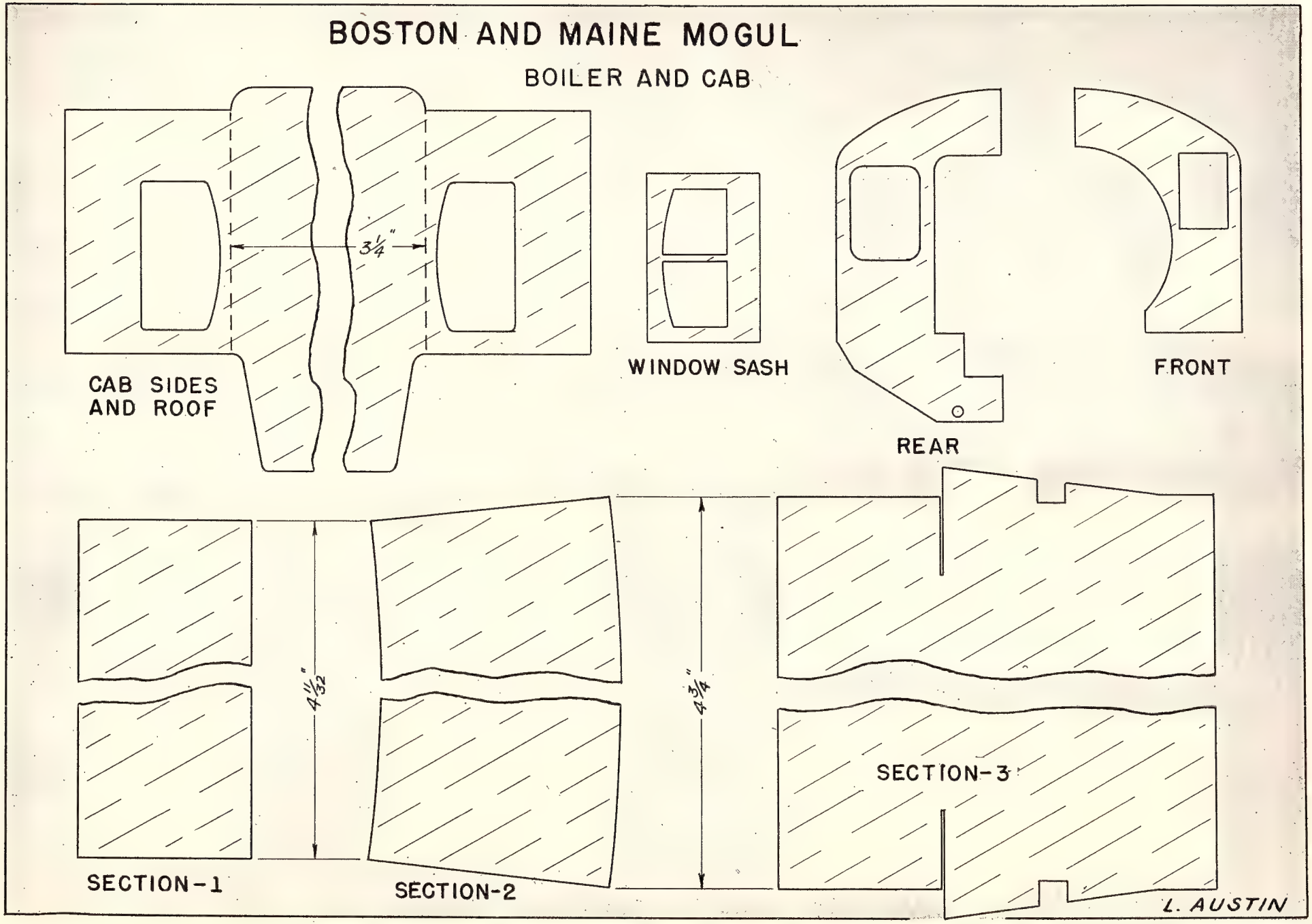


BOILER SECTIONS



MARKER LIGHT BRACKET
MOUNTED THRU SMOKE-BOX

L. AUSTIN


BOSTON AND MAINE MOGUL
BOILER AND CAB
3¼"
CAB SIDES
AND ROOF
WINDOW SASH
REAR
FRONT
4 11/32"
4¾"
SECTION-1
SECTION-2
SECTION-3
L. AUSTIN

ALTHOF, BERGMANN & CO.

along the tinplate track with *Louis Hertz*

ALTHOF, BERGMANN! There is a name which one can roll on the tongue, conjuring up visions of long past tin locomotives and clouded fragments of bygone tinplate history. The once proud firm of Althof, Bermann & Co. had been forgotten for more than half a century when tinplate research first started to bring it to light again, endeavoring to assign it a proper place in the scheme of things.

As research progressed, occasional information concerning this old time tinplate manufacturer has appeared on these pages, notably in March, 1945, and in February, 1946. From these very fragments, it has been perceived that this company played a far more important role than had generally been thought, and was one of the leading American makers of tinplate trains in the 1870's and 1880's, perhaps second only to Ives itself!

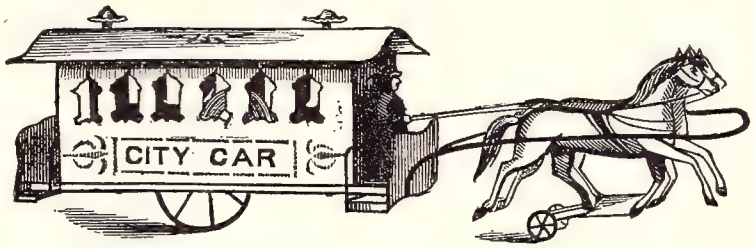
As interest increased, we received requests for still further information which would present the entire picture, and so we devoted some time to a very thorough investigation of the subject. Fascinating and intriguing as this research proved to be, it was hardly simple. We had no idea at the time that eventually we would have quite as comprehensive a picture of Althof, Bergmann & Co., as here recorded.

To begin the story, we must go back to New York almost one hundred years ago, to 1854. Here we would find the Althof brothers, Charles, Louis and Frederick, both singly and collectively (as Althof Bros.) engaged as importer and dealers of "Fancy Goods" at 59 and 61 Maiden Lane. "Fancy Goods" was used in those days to describe all articles considered of small import or decorative use, including toys.

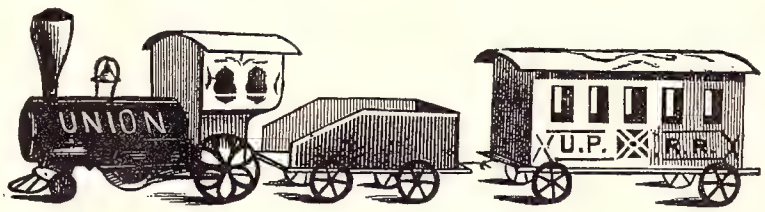
Almost directly across Maiden Lane, at No. 54, we would find one Hermann Bergmann, also dealing in fancy goods and maintaining another establishment or warehouse at 29 Liberty St. In 1856, the firm of Althof, Bergmann & Co. was formed by combining these interests, the new company having quarters at 54 Maiden Lane and 29 Liberty St. In the early 1860's, Augustus Bergmann and Gustavus Cronemeyer also became associated with the company. For exactly thirty years, from 1856 to 1886, the house of Althof, Bergmann endured under that name, although there were continual minor changes in the owners, with Louis Althof alone of the original partners, remaining to the end.

Originally the company were merely importers and jobbers, but in the 1860's began to manufacture tin and mechanical toys, soon becoming one of the leading firms in this field. They continued on with their other activities, however, for some time, but at the end were devoting them-

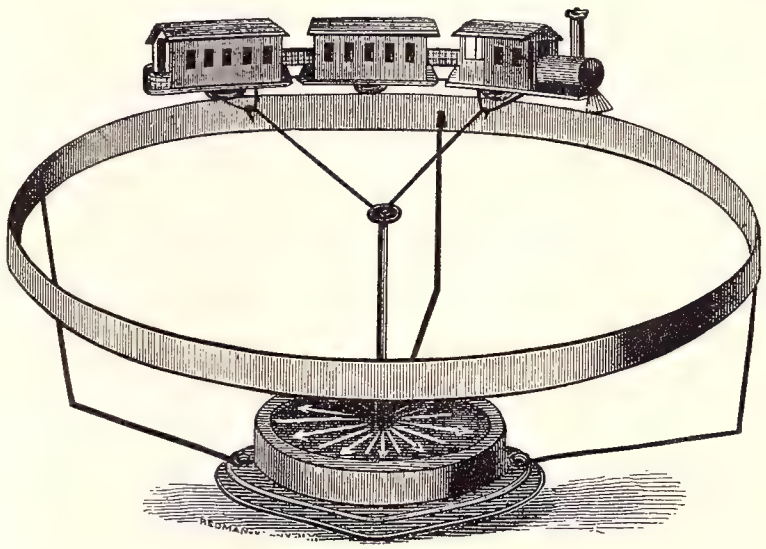
(*Continued on page 48*)



An Althof, Bergmann tin clockwork horse car, one of their larger models, complete to the driver standing on front platform. The spring may be seen clearly through the window.



A small, tin trackless clockwork Althof, Bergmann train of the 1870's. "Union" was a very common name on their locomotives, the balloon-type stack also somewhat typical of their construction in this period.

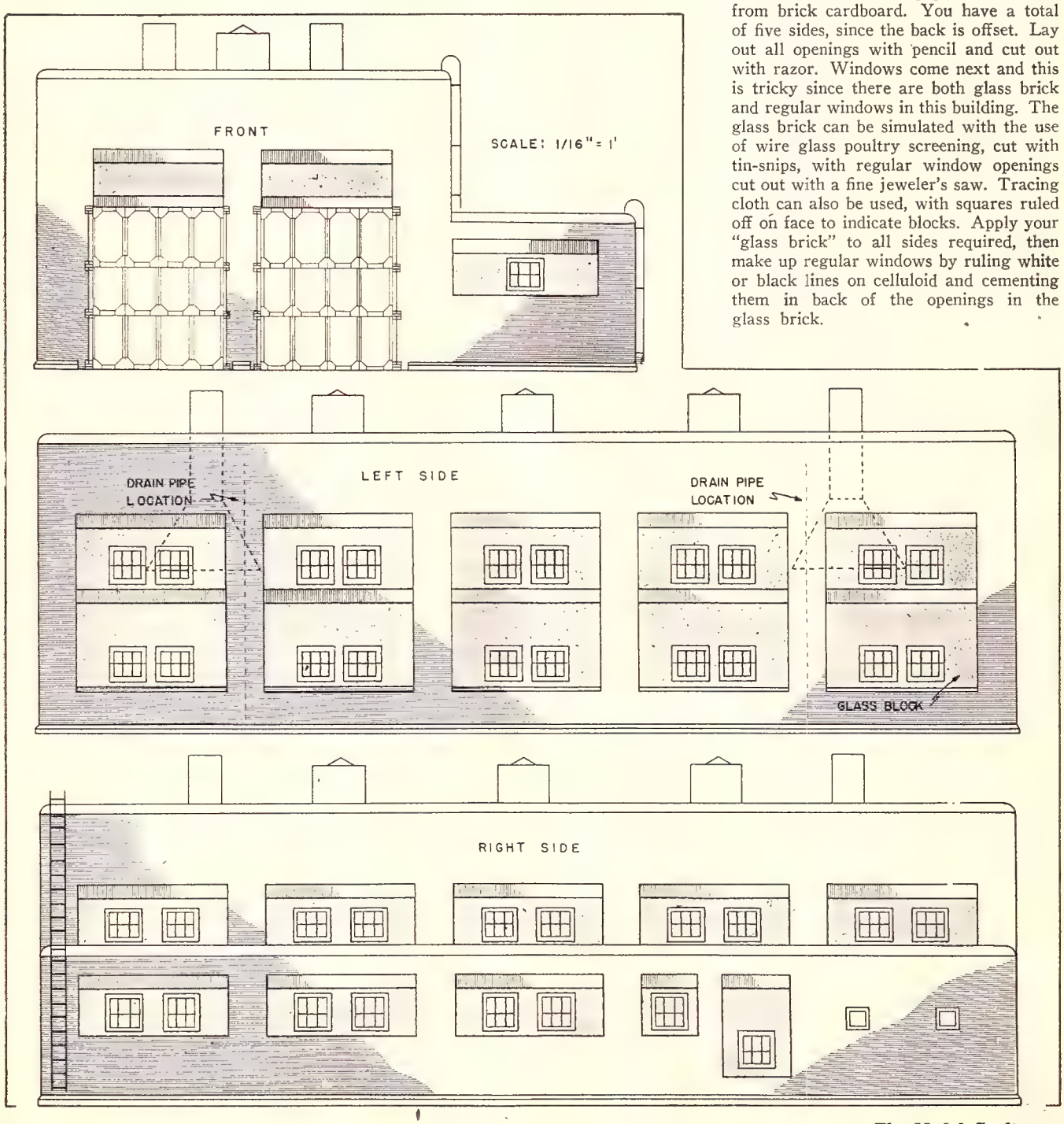


This elevated train set of the early 1880's, Althof, Bergmann's most novel production, was powered by a clockwork in the center base. Design of the locomotive and the connecting guard rails between cars indicate a desire to closely emulate the details of the early elevated trains.

Engine House

THIS engine house is ideal for that road having a small roster of engines, such as our model pikes. It is unique in the fact that it gets away from the conventional roundhouse and turntable theme. The prototype does not have a turntable, but is situated in a large wye. For the benefit of "juice" fans, just eliminate those smokejacks and you'll have a fine carbarn.

The brick structure can be formed from cardboard and brick paper or directly from brick cardboard. You have a total of five sides, since the back is offset. Lay out all openings with pencil and cut out with razor. Windows come next and this is tricky since there are both glass brick and regular windows in this building. The glass brick can be simulated with the use of wire glass poultry screening, cut with tin-snips, with regular window openings cut out with a fine jeweler's saw. Tracing cloth can also be used, with squares ruled off on face to indicate blocks. Apply your "glass brick" to all sides required, then make up regular windows by ruling white or black lines on celluloid and cementing them in back of the openings in the glass brick.



All doors are formed from bristol and cemented in place in open position as seen in photo. Add the door tracks and downspouts at this time. Make up a flat roof from black bristol board, taking dimensions from your built-up sides. Two adjacent sides are then cemented together and the roof cemented in to square the structure and add extra support. The remaining sides and small roof are now added. No floor can be installed since tracks run through the building, but you can install flooring at either side of and between the doors, leaving just the track space empty. The "floor" running between the two opposite centerposts may well be made of bristol board bent up in a flange to add stiffness and with triangles of cardboard at its ends bracing the centerposts.

The plans show the shape of the cornice at top of the walls. Make up from strip wood, sand to shape and paint with two coats to hide grain of wood. (White or gray color.) Before installing the cornice, add "back walls" to give illusion of thickness to each side, extending from top of cornice to roofline. The cornice can now be added over these pieces.

As a final detail, add the ladders, smokejacks and vents. To be correct, the vents should be turned on a lathe, but creditable ones can be made from short lengths of various sized dowels cemented together.

When placing your engine house (or carbarn) on your layout, don't forget the tip given previously. Never use ties in your terminal. Spike your rail directly to the baseboard and sprinkle cinders liberally around. That's the way with all engine terminals!

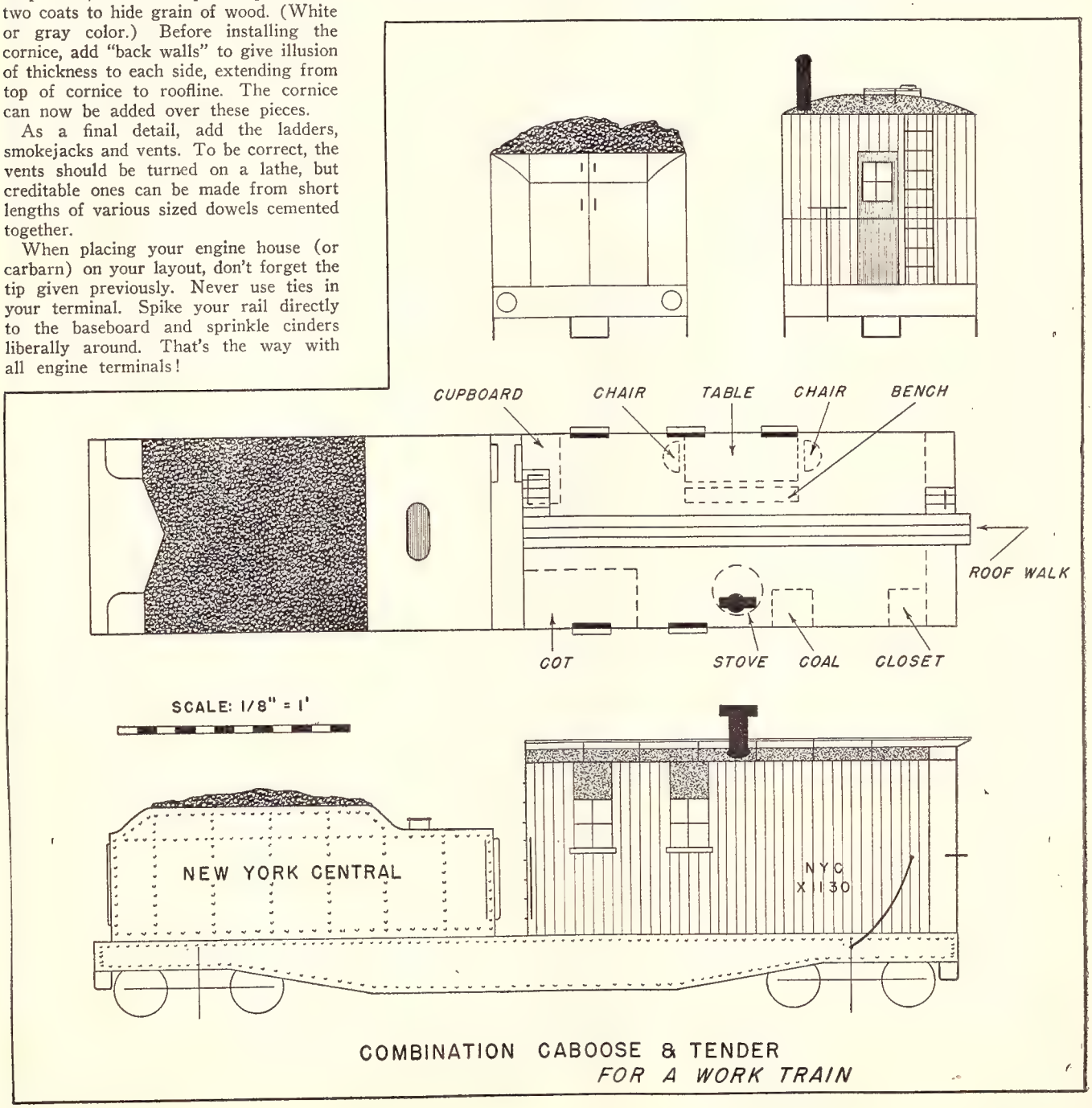
Caboose & Tender

By ED. McTIERNAN

HERE is a novel car, which combined with a small crane and a flat car or two loaded with wheels and trucks would make an ideal work train for that small layout. Any branch line which will not accommodate a large work train will surely utilize this car to advantage.

The enclosed section is really a caboose cut in half. This is made of wood with a tar paper roof, with shades of tar paper on the outside of each window. These shades extend from the roof and curve up over the windows, protruding out approximately three inches. The rear of this section resembles a caboose, however the ladder goes straight up and terminates on the underside of the roof. An archtype roof is employed and can be made up from a piece of balsa wood, 1/8" thick. The prototype has wooden sides which can be simulated with use of cardboard. Two windows are located on the left side and three on the right side.

As seen on the plan, the bottom of this novel car is an old steel flat car which can be easily made up from 1/8" pine. Sides and ends are covered with cardboard. Don't forget that necessary rivet detail and the wood scribing. To complete the car, add a roof walk on the caboose section and also a stove pipe, ladders, grabirons, brake wheel and cylinder.



COMBINATION CABOOSE & TENDER
FOR A WORK TRAIN

Development of Power Boat Hulls

By BOB GRAHAM

FOR the benefit of those who have only recently become interested in model speed boats, we show some sketches which give the development of hull design in the last fifteen years or more. In fig. 1, we see the simple *scow,* with moderate planing angles. Despite its simplicity, boats of this type have reached speeds in the neighborhood of 45 MPH. Figure 2 is more difficult to build due to the "V" bottom, but it makes an attractive looking boat and is capable of the same speed as the scow. Both these designs had its step about five-eighths of the length from the stern and used a direct propeller shaft. The bottom design of these boats absorbed power to a certain extent, and the thrust of the propeller was not fully used in forward motion due to the angle of the shaft.

In fig. 3, we see a big improvement in two ways. The two-step bottom reduced surface contact with the water and due to balance being distributed over two steps, the tendency to "porpoise" was reduced. This design was originated by Mr. French, of London, England, which he called the "Little Star." The writer has imported plans of this boat and loaned them to men in the New York area. Modifications of this design were used by Kalfus, Waller, Thorp, Parohl and many others who have made records and high speeds.

By this time, the articulated drive was also in use, having been devised by M. Suzor, of Paris, France. By using a universal joint forward of the strut, the propeller thrust was straightened out. Fig. 4 was an adaption of the "Ventnor" design as used on full size speed boats. Pontoons extending beyond the sides of the boat had a tunnel between them. In most cases, the aft step was still used. With this design, speeds began to increase, particularly in the smaller classes powered with 10 c.c. engines. Due to the wide beam and increase in speeds, in windy weather loop-the-loops and spills were a common sight at races.

In fig. 5 we see a type designed by the Detroit boys, having narrow pontoons well forward, with deep step and steep angles. Instead of the conventional deep strut with the prop well under water, they used a strut with a drop about equal to the step. With only the tips of the prop in the water, the engine r.p.m. is high and speeds over 70 MPH have been attained.

Usual fittings made to connect the stock engines to the propeller shaft are shown in fig. 6 & 7. We know of nothing sold for this use, so if you cannot make them it will be necessary to give the job over to a machinist. Possibly a Boston

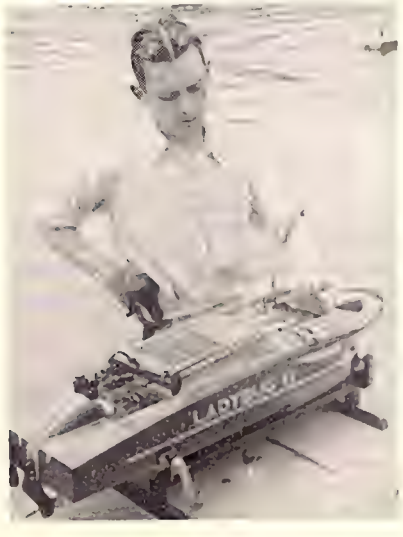
Gear Co. Curtis type universal could be used, but it would have to be drilled and tapped. It would also be fairly large to take the 5/16th thread for the engine. Fig. 8 shows the flywheel design used by the writer on 10 c.c. engines. Weights between eight and sixteen ounces can be used. Some flywheels are available from manufacturers. Fig. 9 shows a strut in popular use. The shaft through the strut is 3/16th inches and the main drive shaft to the engine is usually 1/8th in size although a heavier one can be used if desired. Do not forget the oil holes and do not forget to use them before each run!

Here are a few more dates of back issues containing good model boat material. February and March, 1939, had articles on propeller design and pattern making. The June, 1940, issue had an article on design and construction of built-up propellers using sheet steel blades. An extensive article by Bob Cornell on design and tune-up in general was included in the May, 1943, issue. May and June, 1941, issues included a good design and construction article for a Class D or E two-step hull by Jack Thorp.

There are many of you fellows who have missed articles in back issues since being tied up in the service or for several other reasons. Would you be interested in a "Model Speed Boat Handbook" containing reprints of most of this material, together with much new material and valuable pictures? A book of this nature would sell at a reasonable cost if there were sufficient demand for it. *Write to the Editor of Model Craftsman if you would be interested in such a book.* And don't forget to let him know if you like this material in the magazine. How about you speed-boat fans in the Mid-West and West Coast sending in material?

OPEN INVITATION is extended all Boat Club members throughout the country to attend the E.M.P.B.C. sanctioned regatta being held at Patterson Park Lake, Baltimore, Md., on Sunday, June 22nd. This invitation comes direct from the Baltimore boys who are anxious to have all attend for a real day of fun. First, second and third prizes will be awarded for high speed of the day.

Mr. H. D. Brailsford, of Larchmont, N. Y., with one of his popular flash steam boats.



A At a three-day regatta at Detroit, Mike Succarde's Class A Steam was first place at 48.56 MPH.

B Martin Waller, of the New York Boat Club, with two of his boats which have won many races. On the right is his Class C job which held the world's record for about four years.

C Ernie St. Antoine, of Windsor, Ontario, Canada, with his world's record holding Class C boat. Last Sept., at a Detroit race, this boat ran at 61 MPH.

D "Prelude to Spring"—James T. Sollers, Jr., Vice-Commodore of the Baltimore Model Power Boat Club, shown in his shop getting ready for the coming season.

By W. A. MUSCIANO

SPEED was the important factor in designing this control liner. Effort was made to eliminate anything which might interfere with swiftness of the design. Among these items hindering speed are the propeller wash ruining the effectiveness of the wing airfoil and the turbulence created by the wing, causing a flutter in the stabilizer. These defects are amplified in a fast design where the model travels so fast it does not give the disturbed air sufficient time to smoothen out. A pusher canard corrects these conditions and if used with efficient airfoils, enclosed engine and a glass-like finish, it is bound to be successful providing it is correctly balanced.

"Feet First" incorporates all of these features, plus a take-off dolly. Forward wing or stabilizer uses the N.A.C.A. 2409 airfoil, while the main wing uses the N.A.C.A. 2412. Both sections are considered excellent for speed models.

Construction is typical control line style. The fuselage is made in two halves, joined horizontally on the center line. Cement very lightly since they must be separated later. Using solid model practice, the fuselage should be carved and sanded and given a coat of clear dope. Now separate the two halves and hollow to a wall thickness of approximately 3/16" except as shown on plan. Note that a few bulkheads are carved into the fuselage ending at center line. The combination engine cowl and vertical fin may be hollowed to 1/16" thickness since it is not subject to stress. Air scoop and air outlet holes are cut after the fin has been completely finished. Interior of the fuselage should receive at least two coats of clear varnish before doing anything further. Engine mount is then added, using plenty of cement. Notch the mounts to fit the wing spar which is added next, cementing it to the mount and fuselage shell. This should be set aside overnight to thoroughly dry. A solid stabilizer is used, stiffened with a plywood spar. The spar should be cut first, tapering from 3/8" to 1/16", and then two sheets of 3/8" balsa cemented on each side. When dry, the balsa can be carved to the taper of the spar and to the airfoil section shown. After sanding, the elevator may be cut out and a hole drilled in the stabilizer, spanwise, to fit the torque tube. When tube is inserted, the horn and elevator are attached to it and the assembly cemented on the lower fuselage shell. The controls are installed using specified materials. Small grommets may be inserted through the fuselage shell to facilitate movement of the control wires. When controls are completed, upper shell is cut on indicated line, just forward of bubble canopy. The forward section is cemented to the lower shell and stabilizer while the rear portion of the upper shell is removable for access to batteries, engine, etc. It is held in place by the machine screw and aligned with the two 1/8" dowels.

Wing construction is simple. Cut out all ribs using the templates shown on the plans. Cement onto the spar (attached to fuselage) along with leading and trailing edge. Carve and sand both edges to shape and install the control line guides. Entire wing is covered with 1/16" sheet balsa and sanded well, which completes the basic construction.

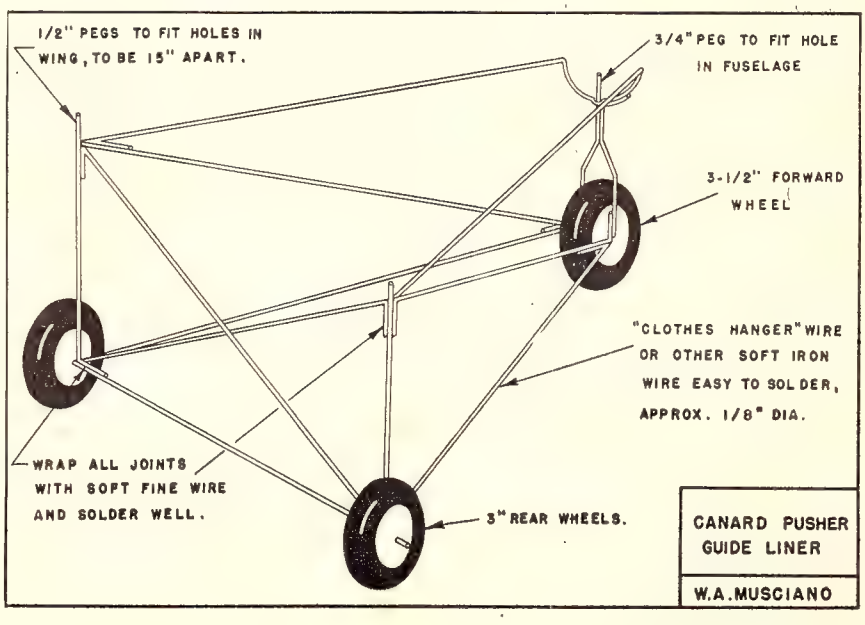
A high polish was previously mentioned which, in the author's opinion, is necessary for speed jobs. The process is very similar to that used on hand launched gliders. Start off by doping the entire model twice with clear dope, sanding in between coats. A mixture of thin dope and talcum powder makes a very good wood filler. Brush this on with intermittent sandings until grain is filled. Now apply several coats of dope of desired color. When thoroughly dry (at least 24 hours) the model should be polished with rubbing compound until a mirror-like surace is obtained. The final step is to polish the ship with simonize or similar rubbing wax.

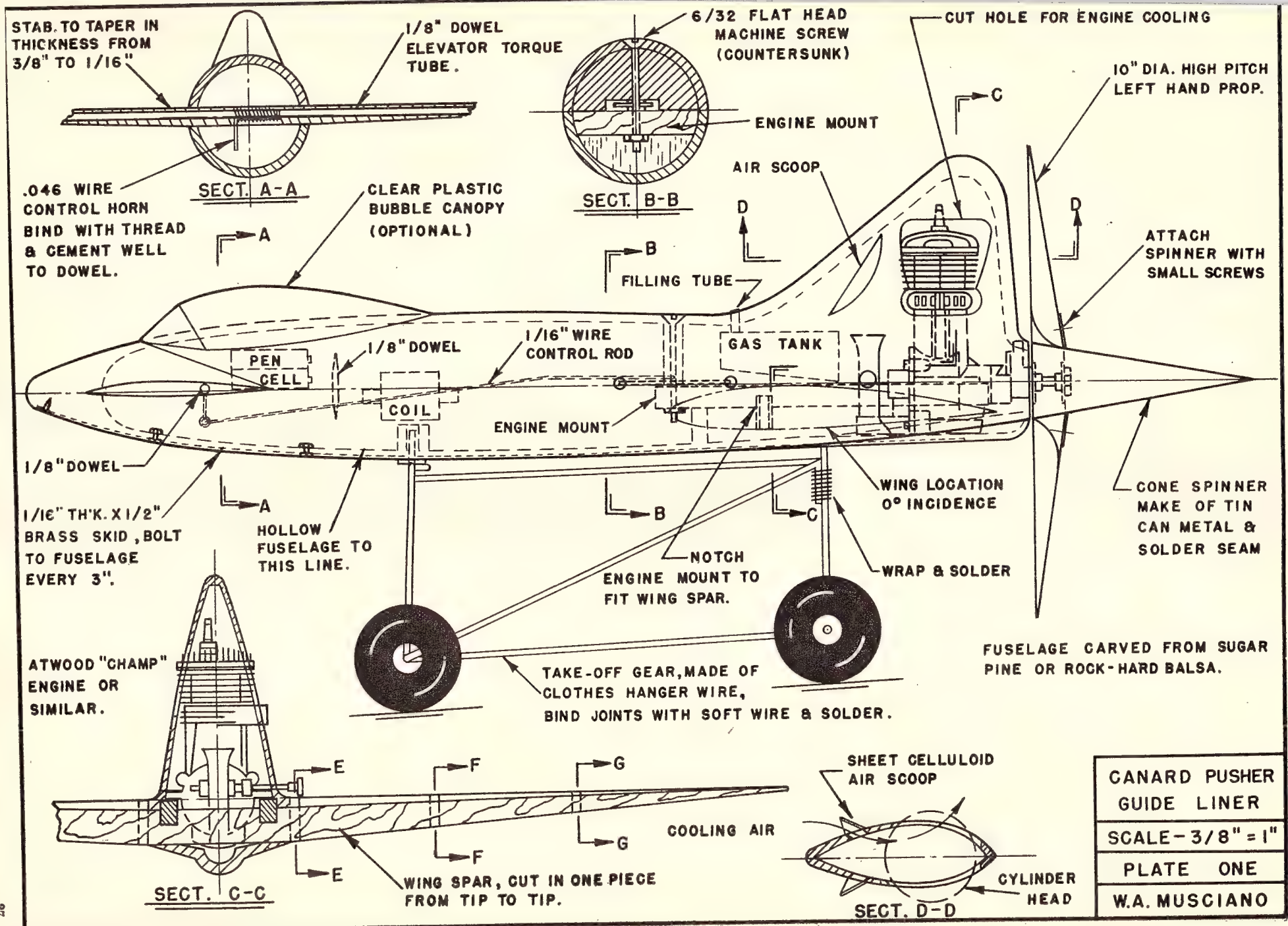
The gas tank can be purchased or fabricated by the builder. It should be made of metal instead of plastic materials since some of the "hot fuels" dissolve plastic tanks. Attach tank to engine mount with lugs and wood screws.

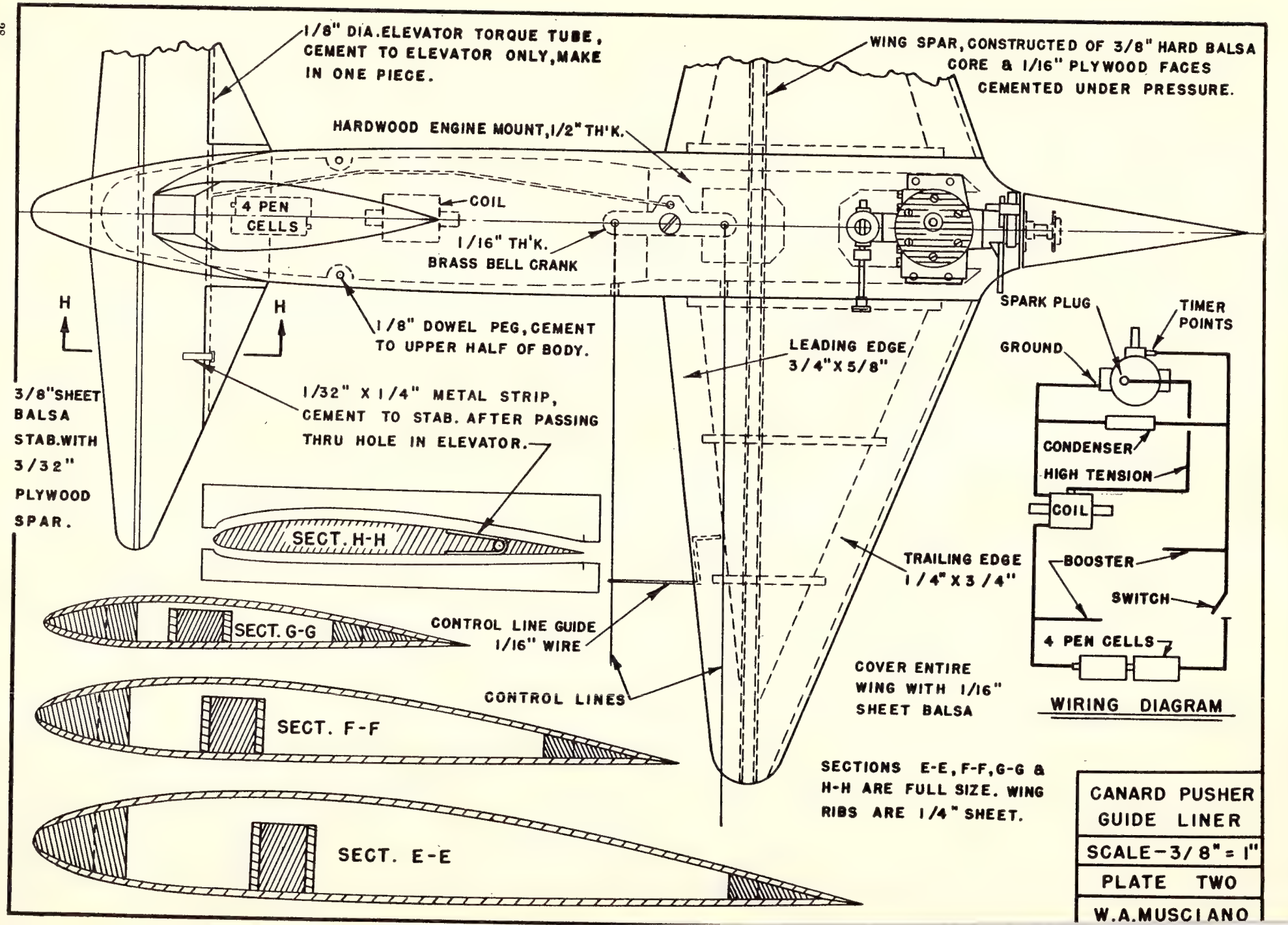
A bubble canopy may be added if desired. The author added one, despite the fact that it would decrease the speed slightly, just for the sake of realism. This can be carved from balsa or made of plastic.

A take-off dolly is also recommended, either purchased from a dealer or built to your own pet design. A tricycle type with single wheel in front was used; the larger the wheels the better.

Flying technique for this canard is no different than ordinary racers. The important item to keep in mind is when the elevator is depressed in a canard, the nose will rise and vice versa, just the opposite from conventional designs. This must not be forgotten in the heat of a contest or results will no doubt be disastrous. No difficulty was encountered with take-offs from the dolly even though trouble was anticipated from the pusher prop getting in the way of the dolly.


1/2" PEGS TO FIT HOLES IN WING, TO BE 15" APART.
3/4" PEG TO FIT HOLE IN FUSELAGE
3-1/2" FORWARD WHEEL
"CLOTHES HANGER" WIRE OR OTHER SOFT IRON WIRE EASY TO SOLDER, APPROX. 1/8" DIA.
WRAP ALL JOINTS WITH SOFT FINE WIRE AND SOLDER WELL.
3" REAR WHEELS.
CANARD PUSHER GUIDE LINER
W.A.MUSCIANO


STAB. TO TAPER IN THICKNESS FROM 3/8" TO 1/16"
1/8" DOWEL ELEVATOR TORQUE TUBE.
.046 WIRE CONTROL HORN BIND WITH THREAD & CEMENT WELL TO DOWEL.
SECT. A-A
6/32 FLAT HEAD MACHINE SCREW (COUNTERSUNK)
ENGINE MOUNT
SECT. B-B
CUT HOLE FOR ENGINE COOLING
10" DIA. HIGH PITCH LEFT HAND PROP.
AIR SCOOP
CLEAR PLASTIC BUBBLE CANOPY (OPTIONAL)
ATTACH SPINNER WITH SMALL SCREWS
FILLING TUBE
PEN CELL
1/8" DOWEL
1/16" WIRE CONTROL ROD
COIL
GAS TANK
ENGINE MOUNT
1/8" DOWEL
1/16" TH'K. X 1/2" BRASS SKID, BOLT TO FUSELAGE EVERY 3".
HOLLOW FUSELAGE TO THIS LINE.
WING LOCATION 0° INCIDENCE
CONE SPINNER MAKE OF TIN CAN METAL & SOLDER SEAM
NOTCH ENGINE MOUNT TO FIT WING SPAR.
WRAP & SOLDER
ATWOOD "CHAMP" ENGINE OR SIMILAR.
TAKE-OFF GEAR, MADE OF CLOTHES HANGER WIRE, BIND JOINTS WITH SOFT WIRE & SOLDER.
FUSELAGE CARVED FROM SUGAR PINE OR ROCK-HARD BALSA.
SECT. C-C
WING SPAR, CUT IN ONE PIECE FROM TIP TO TIP.
COOLING AIR
SHEET CELLULOID AIR SCOOP
CYLINDER HEAD
SECT. D-D
CANARD PUSHER GUIDE LINER
SCALE-3/8" = 1"
PLATE ONE
W.A. MUSCIANO


1/8" DIA. ELEVATOR TORQUE TUBE, CEMENT TO ELEVATOR ONLY, MAKE IN ONE PIECE.
WING SPAR, CONSTRUCTED OF 3/8" HARD BALSA CORE & 1/16" PLYWOOD FACES CEMENTED UNDER PRESSURE.
HARDWOOD ENGINE MOUNT, 1/2" TH'K.
4 PEN CELLS
COIL
1/16" TH'K. BRASS BELL CRANK
H
H
1/8" DOWEL PEG, CEMENT TO UPPER HALF OF BODY.
3/8" SHEET BALSA STAB. WITH 3/32" PLYWOOD SPAR.
1/32" X 1/4" METAL STRIP, CEMENT TO STAB. AFTER PASSING THRU HOLE IN ELEVATOR.
LEADING EDGE 3/4" X 5/8"
SECT. H-H
SECT. G-G
CONTROL LINE GUIDE 1/16" WIRE
CONTROL LINES
TRAILING EDGE 1/4" X 3/4"
SECT. F-F
SECT. E-E
COVER ENTIRE WING WITH 1/16" SHEET BALSA
SECTIONS E-E, F-F, G-G & H-H ARE FULL SIZE. WING RIBS ARE 1/4" SHEET.
SPARK PLUG
TIMER POINTS
GROUND
CONDENSER
HIGH TENSION
COIL
BOOSTER
SWITCH
4 PEN CELLS
WIRING DIAGRAM
CANARD PUSHER GUIDE LINER
SCALE - 3/8" = 1"
PLATE TWO
W. A. MUSCIANO

BARNSTORMERS HOLD BANQUET

THE West Philadelphia Barnstormers held their Annual Banquet and awarding of trophies on January 11th. Attending as guests were Mr. E. Angus, A.M.A. President, Capt. R. S. Barnaby, USNAC, and Mr. Leroy Fox, Third District Coordinator. Captain Barnaby figures prominently in aviation as President of the Soaring Society of America, and an important figure in the Naval Air Corps. He is also one of the first model builders, starting back in 1904 after seeing a picture of the Wright Bros.

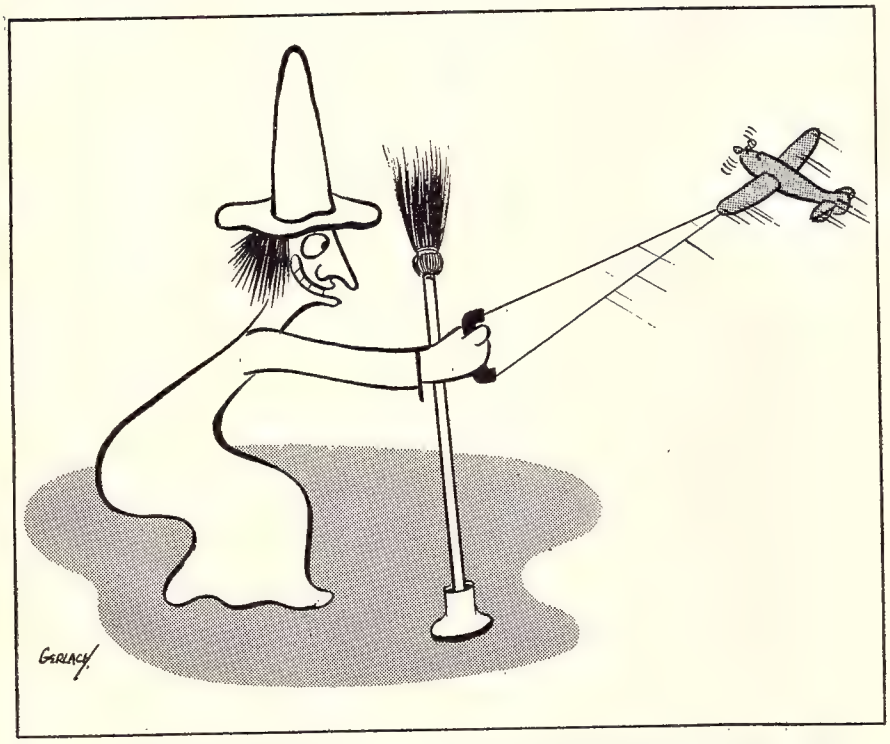
Mr. Angus showed color movies of many contests and events, everyone being interested in seeing all the old modelers and their planes. Trophies were then awarded as follows: First place Free Flight, Warren Jacobs; Second place Free Flight, Jack Lenderman; Third place Free Flight, Allan Miller; Fourth place Free Flight, Tom O'Connor; Fifth place Free Flight, Jack Krick. First place U-Control, Harry Allison.

DODGE CITY ORGANIZES

THE boys of Boot Hill in Dodge City, Kansas, have just been organized, forming a new Club called "The Dodge City Cloud Clubbers". Through the efforts of Tom Ryan who started this club with the Boot Hill Hobby Shop, a sponsor was found, namely the Mahon Air Service, who generously provided an area for holding contests. They also allocated facilities and class room space plus prizes, ranging from one hour dual instruction to 30 minutes instruction.

The Club has no limitation as to age, sex or color. Activities cover gliders, rubber and gas divisions plus unofficial jet-powered racers. Meetings are held every 2nd and 4th Thursdays of the month. Plans called for an early announcement of an Open Meet to get them off to a good start.

Dodge City Officials have also promised a portion of the park to be leveled for Control Line Flying and are also interested in a model race track.



EAST-WEST ANNOUNCEMENT

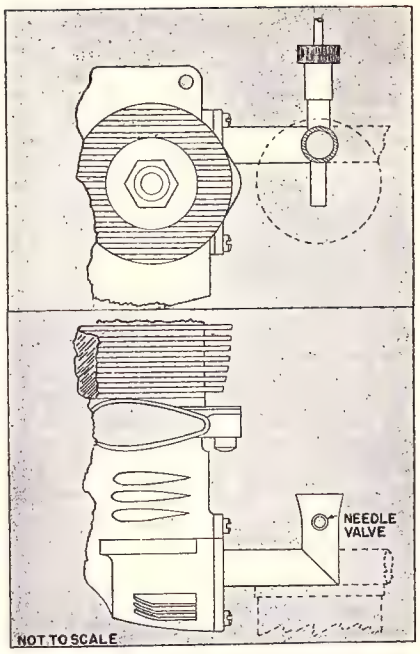
THE East-West Contest Committee extend their thanks to E. V. Hoermann, the School Board, Chamber of Commerce and the Model Clubs of St. Louis who have placed their largest and finest Stadium at their disposal for the East-West Meet which is to held on Sept. 6th & 7th. The Stadium is equipped with flood lights and will seat 30,000 people.

Geographically speaking, this is a battle between the East and West *Coasts*. Anyone east of the Mississippi, however, who is willing to come to any of their elimination meets and qualify for the big meet, is perfectly welcome to do so.

BANTAM AIR INTAKE CONVERSION

HAVE you ever wanted to use your Bantam in that "special" job, but had to give it up because the intake would pass into the firewall? Here is one solution, which also facilitates "choking" when necessary.

The intake arrangement of the Atwood was used as a model, but since there was no casting in which to screw the intake, modifications had to be made. First, obtain an additional intake tube, so that either version may be employed at any time. (Extra tube not essential.) The intake tube is cut at angle shown in sketch. A hack saw or even a jig saw will cut the soft aluminum. Both edges



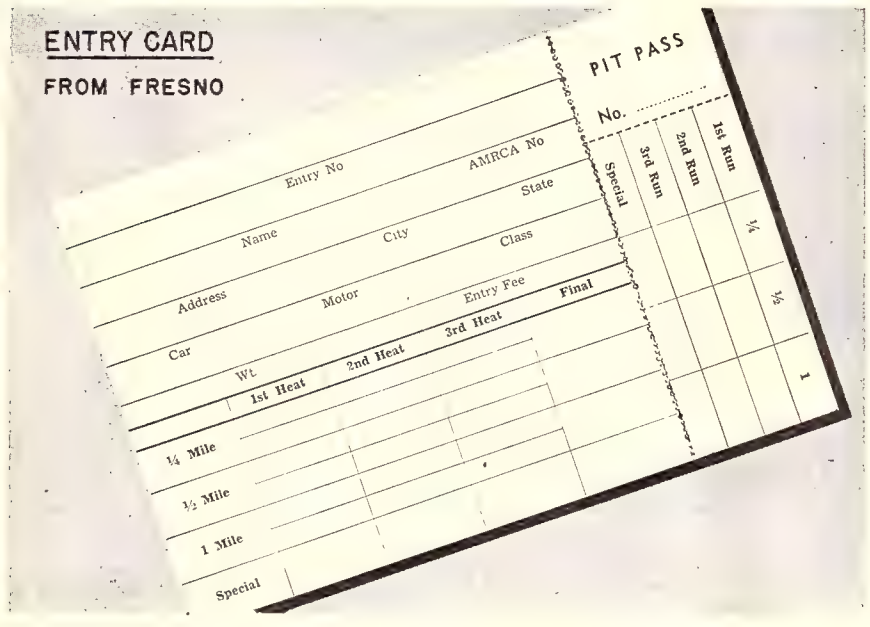
are filed to a close fit and the surrounding surfaces scraped or filed to a bright finish. Aluminum solder, of the type sold in a bar the size of a pencil, is used and an iron is used as heat. Do not use a torch for the soft aluminum will melt. Put a fillet all around the joint for strength. Drill hole as shown for the needle valve. Exact location is not critical, but can be varied according to desire. The type of gas tank used is up to the builder. Tank and needle valve are connected by either neoprene or plastic tubing. . . . *Roger F. George, Washington, D. C.*

SALEM CLUB HOLDS CONTEST

ON FEB. 16th, the Salem Model Airplane Club of Salem, Oregon, held a Tri-Club Contest at the Monmouth Airport, with Elmer Roth, club member, knocking out 37 points to take first place. The Portland Gashoppers piled up 150 points to win the Tri-Club Trophy, the Cloud Chasers winning 134 points and the Salem Club taking 131 points. Results follow:

	Aver. Time (sec.)
CLASS A JUNIOR	
Ed. Knapp (Cloud Chasers)	138.7
Fred Vaspen (Portland Gashoppers)	75.8
Ray Chalker (Portland Gashoppers)	69.0
CLASS A SENIOR	
Reese Boyd (Portland Gashoppers)	449.6
Jack St. Clair (Cloud Chasers)	435.3
Earl Cayton (Cloud Chasers)	179.3
CLASS B JUNIOR	
Dick Perterson (Salem Club)	120.0
Rex Bently (Cloud Chasers)	117.3
Phillip Keefer (Salem Club)	112.6
CLASS B SENIOR	
Elmer Roth (Salem Club)	201.6
Art Mentzer (Salem Club)	101.2
Rex Baumgardner (Portland Gashoppers)	86.3
CLASS C JUNIOR	
Richard Nichols (Portland Gashoppers)	184.5
Glen Graber (Cloud Chasers)	125.6
Rex Bently (Cloud Chasers)	112.8
CLASS C SENIOR	
Jerry De Berry (Cloud Chasers)	235.6
Elmer Roth (Salem Club)	158.6
Ralph Majeski (Salem Club)	105.3

MINIATURE RACING CARS

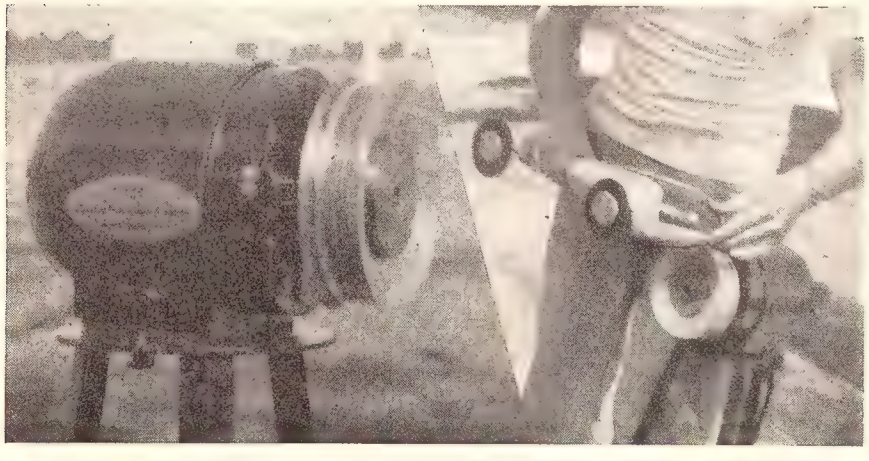


FRESNO RECORDING SYSTEM

FOR the benefit of those clubs and individuals interested in an efficient method of recording, we present here that system used at the recent All-Proto Race held at Fresno, California. This system, developed by "Woody" Woodward, permits the awarding of trophies within a few minutes following the last run. Many successful race meets have been fouled up by the length of time involved in deciding various place winners of the meet.

The type entry card used is illustrated here. At the start of the meet, these cards are filled out, with a number entered on both the card and Pit Pass. These numbers and names are then transferred to the time sheets, constituting a double entry. The time sheets are filled out at the end of each car's run, as is the entry card which is then filed by entry number. These cards are filed by number until the last run is completed for that particular car, at which time it is filed by class and top speed. (*Top speed filed on top and down to lowest speed.*) As each car completes its final run, it is fairly easy to put it in its proper place. When the last car has completed its run, the card is filed in less than one minute and the awarding of trophies can be started even before the last car is put on the bench.

The Pit Pass is torn off and given to the contestant who can then record his own speed and not bother the recorder.



Motor starter used at the Ormond Raceway, Daytona Beach, Fla. It consists of a ¼ H.P. motor, turning 1750 RPM, with a grooved aluminum cast pulley wheel 6" in diameter, keyed directly to motor shaft. According to Lawson Diggett, who sent in photos, the starter turns the car motor at a good speed for starting.

MIDGETS ROAR AGAIN IN ARIZONA!

THE Phoenix Club is again under way! A few months ago, some of the old timers will recall the pre-war cable track at Sky Harbor Airport. The first look was very disheartening. Fences down, weeds up, wide cracks and very little that resembled a model race track. Still in the air could be heard the roars of ghost cars that had thrilled so many before the war. Determined hands were soon at work, and in short time the grounds were cleared, track repaired, new crash fences erected and about 25 members recruited. Cars began to run every Sunday, with increased crowds and speeds.

On February 9th, the club held its first meet, with everything working like clockwork—a car on the track every 3 minutes. Interest was high, with an estimated crowd of 3,000 people turning out for the events. Each contestant was given three runs in each the ¼ and ½ mile events. The day started off cool and humid, warming up later when the contest started. Last minute adjustments were made, but all cars were running 3 to 5 miles slower than usual due to the rare humid condition. Few contestants knew just what to do under these conditions. Previous unofficial records had been set on this track by Graham with a Matthews V-Car at 107 MPH in Spur Gear, and by Williams with a McCoy Invader at 95 MPH in Proto.

SPUR GEAR ¼ MILE

		MPH
1.	Kinsey	101.12
2.	Graham	100.00
3.	Muller	100.00
4.	Anderson	98.90

SPUR GEAR ½ MILE

1.	Graham	102.27
2.	Kinsey	101.85
3.	Anderson	99.50
4.	Muller	95.74

PROTO ¼ MILE

1.	Williams	92.78
2.	Chipperfield	91.83
3.	Bloomquist	90.91
4.	Marshall	90.91
5.	Rayburn	90.91
6.	Stark	86.53
7.	Van Dyke	86.53
8.	Anderson	84.11
9.	Graham	81.82

PROTO ½ MILE

1.	Bloomquist	90.91
2.	Rayburn	90.00
3.	Marshall	89.06
4.	Chipperfield	89.00
5.	Williams	88.23
6.	Anderson	87.38
7.	Van Dyke	87.00
8.	Stark	84.11
9.	Graham	78.94

HOT ROD

		¼ MILE	½ MILE
1.	Webster	83.33	79.64
2.	Muller	80.35	78.26

At their last club meeting, the Phoenix boys decided they lacked one thing—a RAIL TRACK—and decided to have one. Lacking a sponsor to underwrite the project, they got busy and in two days made arrangements to furnish feature speakers for the three largest Civic Clubs and have two of them offering to underwrite the cost of the track. The boys already have the location for the track and

now need the material to build it. The new track will be four-rail, complete with lights for night races and a bleacher unit, topped off with a cable track just inside the rail unit.

The writer had the pleasure of visiting the South Bend, Ind. track as a guest of Elmer Wheeler, of Niles, Mich., and was so impressed by the fine sportsman-like cooperation and welcome extended by that Club, that if miles permitted, my first wish would be to have their Club as guest at the opening of our track. The Phoenix Club also extends a welcome to any other club member or fan to visit us here in the Valley of the Sun. Bring your car with you! . . . . *B. Ray Williams.*

CIRCUIT RACES FOR AKRON CLUB

THE Akron Model Race Car Club now has a membership of 35 with Guy Richard, President; Bill Bissman, V-President; Jack Yager, Secretary. The club has a 35-ft. cable track located at the Akron Airport, Akron, Ohio.

A circuit race for the coming season has been planned with the Cleveland, Columbus, Hamilton and Akron, Ohio Clubs all participating. First race of the season will be run on May 11th at Akron, Ohio. A cordial invitation is extended to all visitors.

CINCINNATI PLANS FOR NEW TRACK

JUMPING the gun on the coming season, the Cincinnati Society of Model Engineers recently held preliminary warm-up runs for their midget cars at the Freeman Ave. Armory, under the direction of Mr. Charles Trible, Chairman of the race car group.

A luncheon and meeting was held following the trial runs, where plans were discussed for raising funds to build Cincinnati's first official miniature race car track on the newly leased ground acquired by the Model Engineers. The new track will be built at the east end of the south side of Kellog Ave., adjacent to the Lunken Airport and Little Miami River.

Plans have been drawn, calling for a 70-foot concrete cable track, with a crash wall and fence, as well as pit space and workshop benches for servicing and repairs. A spectator protection fence and bleachers will be provided for the public to view the events to be held every Sunday and some evenings.

MONROE STAGES MEET

By BILL WUNDERLICH

THE Louisiana Miniature Race Car Club at Monroe staged a non-sanctioned meet at its Lake Side Country Club Track on March 2nd. Purpose of the meet was to bring car owners together and discuss the formation of a circuit to provide race events in this section during the coming season. Cars were entered from Shreveport, Barksdale Field, New Orleans and Monroe, La., and Greenwood, Miss.

Meet some of the boys from the "deep south" at the recent Monroe meet. Left—Brennan, Murphy, Jelks, Pearce, Kail and Major Peck.

Fran Brennan again had his troubles with old man weather, but despite a chilling north wind that whipped over the track all day, the boys had a good time. High spot of the day was the arrival of a big jug of steaming coffee, arranged by Fran, and this helped make things pleasant for the "southern boys."

Some of the Monroe gang decided to hug the fireside and save themselves some leg work and disappointment. The New Orleans Club, fresh from their Mardi Gras Speed Trials, came to Monroe determined to "take home the bacon." When the scores were finally added up, they were in possession of the First Place Trophy in both Proto and Spur Class, as well as some second and third place awards. Brennan had some trouble with his cars but says he has discovered the cause and is just waiting for a chance to get to New Orleans and even the score. Top winners in Proto were: (*in order named*) Henry Pearce, New Orleans; Bob Murphy, New Orleans; Fran Brennan, Monroe; Jack Moralez, Greenwood. Spur winners were John Jelks, New Orleans; Major Peck, Barksdale Field; J. Kail, New Orleans; Fred Keller, Monroe.

PRESENT SPEED RECORDS

THIS is your standing box score representing AMRCA speed records as of January 1, 1947. These are the present existing records as reported to this office, showing highest speeds established on both cable and rail tracks, type car and engine used, together with location and date of established record:

1/16th MILE CABLE TRACK

SPUR (¼ mile): Dick McCoy, San Francisco, July 7, 1946—116.73 MPH (McCoy Car, McCoy Engine)

PROTO (¼ Mile): Howard Lee, San Francisco, July 7, 1946—108.95 MPH (Own Design Car, Hornet Engine)

STREAMLINE (¼ Mile): Jim Gilmore, San Francisco, July 7, (1946—103.32 MPH (Special, Hornet Engine)

1/24th MILE CABLE TRACK

SPUR (¼ Mile): W. Thomas, Jr., Eustis, Feb. 22, 1947—120.32 MPH (Own Design Car, Hornet Engine)

SPUR (½ Mile): Warren Borden, Detroit, Aug. 1, 1946—115.97 MPH (V-Car, Hornet Engine)

SPUR (1 Mile): J. Crossan, Detroit, Aug. 2, 1946—113.38 MPH (V-Car, Hornet Engine)

PROTO (¼ Mile): Dale Martell, Waukegan, Ill., Sept. 1, 1946—113.21 MPH (Own Design Car, Hornet Engine)

PROTO (½ Mile): Howard Lee, Detroit, Aug. 1, 1946—107.97 MPH (Own Design Car, Hornet Engine)

PROTO (1 Mile): Howard Lee, Detroit, Aug. 2, 1946—109.02 MPH (Own Design Car, Hornet Engine)

STREAMLINER (¼ Mile): Jim Gilmore, Detroit, Aug. 3, 1946—104.98 MPH (Special, Hornet Engine)

STREAMLINER (½ Mile): Jim Gilmore, Detroit, Aug. 1, 1946—102.50 MPH (Special, Hornet Engine)

STREAMLINER (1 Mile): Jim Gilmore, Detroit, Aug. 2, 1946—100.44 MPH (Special, Hornet Engine)

1/16th MILE RAIL TRACK

STREAMLINE: W. Weller, Chicago, Aug. 25, 1946—79.30 MPH (Hornet Engine Used)

PROTO: Clyde Rohrer, Chicago, July 18, 1946—76.40 MPH (Hornet Engine Used)

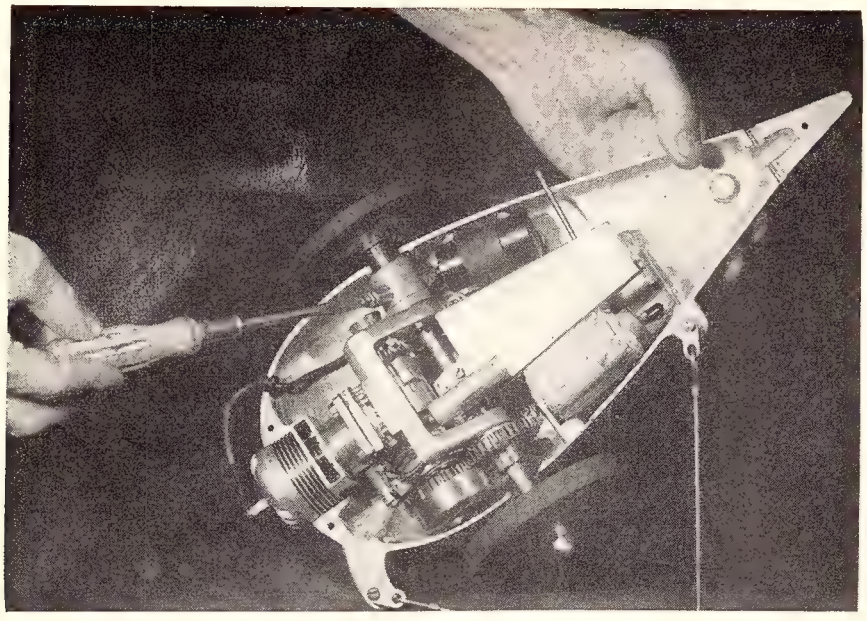


Photo by Hutze

Glen Matthews of Rockford, Illinois, adjusts free-wheeling screw on axle of his spur gear car. Note gears are reversed to most types of spur gear cars.

STATEMENT OF POLICY

By E. D. FITZGERALD
Sec.-Treas. AMRCA

YOUR newly elected officers have just recently been notified of election results and have stepped forward to take their place as *your* representatives.

Through the long, lean years of the war, retiring officers were handicapped with many problems, such as a shrinking membership and a low Treasury. Despite this, they have passed on to us a good hard core of old-time members who have been racing a long time. Here lies the rub—we have also inherited more than our share of personal feuds, petty jealousies and disputes. We shall attempt to clear up this unnecessary confusion and so-called *bad feeling* and try to provide for those persons who really want to race model cars for the sport of the game.

For the guidance and instruction of the membership as a whole, these paragraphs should be carefully read, thought over and remembered for the balance of the year.

Your National Officers are not Referee, Judge or Jury on any or all differences of opinion. Our authority grants us the privilege of deciding the general policy of the Association, managing its affairs for the best interest of its members, and operating its finances at a reasonable profit for the entire membership. Please remember, all Officers serve your Association without pay or thought of remuneration. Of necessity, all time rendered must be considered as part or spare time. Many expenses are incurred that are not chargeable to the Association. Your Association is just barely self-sustaining. Give this your consideration when suggestions are made to further burden it with what you may think a worth while idea. Your *Brain-Storm* may have much merit, but *How Much Will It Cost?* This is not meant to discourage your ideas. Quite the contrary, we welcome them!

Again, we ask your patience regarding acknowledgments and letters which are overdue. The vast amount of secretarial work involved as our membership is expanding, has left your Secretary "in a whirl." *Be patient, he's working hard!*

Not with any sense of reprimand or a spirit of "I know it all," let us bring to your attention some faults caused by a failure to read the Official Rule Book. Let's start off with a typical race. Supposedly, the *Squee-dunk MRCA* wants to hold their big race. They have some hot cars and perhaps a record will be broken. So they write to the National Secretary for a sanction. *When is the race?* Next week! *Do they fill in a sanction form?* No! Though a copy of one is on page 4 of your rule book, they write and ask the Secretary to send them one. All well and good, but several days are lost. The AMRCA Secretary must have the approval of the District Director that the track meets all specifications but the Director has never even heard that a track existed in Squee-dunk. He has never been invited to look over the plant. By now, the Club finally has an Official Sanction but AMRCA is not certain all rules will be enforced. *Why?* Because the appointed Referee (by the Club) wants to know what are the rules on a "Hot Rod." He apparently hasn't read Section III, Article II, third paragraph on page 8. Here it says that the Spur Class may be either front or rear drive, body and chassis optional and that this class is limited by Sec. II, Art. 8 & 9. This means nothing to the entire club since they have been told that the "Hot Rods" are not as fast as the other Spurs. So what? Are we just racing those cars that can go the slowest? Another point that the club hasn't decided is the matter of Classes. In the Proto Class, there are a few boys from the next nearest town who have not had much money so they build their cars themselves. These cars happen to be very fast. They are as well made as anything bought in a Hobby Store and this bunch of boys can prove it. And they do! They have never read anything in the rule book about limiting a car if it were or were not manufactured commercially. The Squee-dunk Club thinks that if any new contestant shows up, he should have a chance to win first place. In what other sport will a special run permit a newcomer to beat a champion? If there are many beginners at this race, isn't it possible for the sponsor club to award a trophy to the man who increases his speed the most between the three heats or use a point system as described on page 12 of your rule book? The expert will almost always run at his top speed, but the novice does not always have good luck or perfect control over his speed.

Get into the habit of reading your rule book and see if it covers your problem!

SALINA PREPARES FOR COMING SEASON

THE boys from Salina, Kansas, recently held their annual election and laid plans for the coming season. New officers are "Corky" St Clair, Pres., Everett Vernon, Vice-Pres., Floyd King, Sec-Treas., Joe Addison was re-elected Corres.-Secretary, with Charles Hedges still acting as Official Referee. Various assignments were given to club members to handle the coming racing, officially opening May 1st and closing the last Sunday in September.

The Club voted to provide a perpetual trophy which would be earned on a point system basis and held for one year. The point system would be arranged in agreement with the AMRCA rule book including track attendance each Sunday of racing as well as special racing events.

Official announcement is made that the Salina Club voted to hold an AMRCA sanctioned State Race on July 20th. You fellows in Kansas keep this in mind; more details will follow next issue. A special Labor Day meet for Aug. 31st and Sept. 1st to be a Labor Day Classic and Invitation Meet, including cars by proxy, is being planned. Those who cannot attend, send your cars to be run by a special committee. More details later.

Some secrets just have to leak out, and we hear that "Corky" St Clair has a new mechanic this year, and Pat Brooke is doing the plumbing job again on new gas tanks. Al Goedde says "six heats and she starts bogging" so he is in a rut. "Pappy King" hopes to get the new motor broken in so he will really be in the race this year. Genial Carol Beggs is in the cylinder grinding business and Ben Smith, a newcomer, is trying to out-do son Jack. That buzzard Joe Addison is grumbling about not being able to rest on his laurels any longer and hold the track record since hearing some of the grapevine conversation.

John Carlson, President of the Harvey Model Race Car Club.

CHICAGO CABLE FANS

By "HAP" WYCKOFF

WE have noticed with great interest the "Chicago Personalities" which have been appearing in MC. These have all been rail track men, and we thought it only fair to present some of the cable track men, of this vicinity and tip off the readers to the fact that there is plenty of interest in cable racing in the Chicago area.

First crack goes to John Carlson, President of the Harvey Model Race Car Club. John is an old time "nut", having started with the rail track boys many years ago, and then switching to the faster cable cars. He is well known and very popular all through the Middle West, not having missed a race in the last three or four years. He is a bachelor (*his only love being his little cars*) and makes his home with his parents at 8045 Crandon Ave., Chicago. John has a well equipped shop in his basement and is very generous about letting the other boys use this equipment. As President of the Harvey Club, he has been a hard worker and an enthusiastic member who has done much in promoting the club and aiding new members. This season he will be racing his Mathews Spur Gear, a Proto of his own design, a Hot Rod and a Pacemaker.

"LITTLE RHODY" FORMS NEW CLUB

YOU old timers who remember the popular "Little Rhody" Club of Providence, R. I., will be glad to hear that the majority of the disbanded club members met on Feb. 15th and formed a new organization known as the East Providence M. R. C. C. The boys are anxious to let their old friends know that they are completely rebuilding their original track in East Providence next to the Pierce Memorial Stadium off the Barrington Parkway. Plans call for a 1/24th mile concrete cable track to be completed by May 15th or sooner.

RECOMMENDED CONSTITUTION FOR AMRCA CLUBS

CONSTITUTION

ARTICLE 1.

Organization and Purpose

Sec. 1.—The organization existing under this Constitution shall be known as (————) MODEL RACE CAR CLUB.

Sec. 2—Its headquarters and principle office shall be located in City, County, State.

Sec. 3.—The purpose for which the Club is created, is to promote the general interest of Model Auto Racing in all its branches, and to provide a suitable Race Track and Club rooms in connection therewith.

ARTICLE 2.

Membership

Sec. 1.—Any person of good moral standing and over eighteen (18) years of age, and who is interested in the purpose of the Club, and who is not a member of any similar Association or Club. This, however, does not apply to any National or International Governing Body.

Sec. 2.—Membership in the Club shall be divided into two (2) classes, to wit; Active and Honorary Membership, and whenever the word "member" is used herein, or by the Club, it shall be taken to mean Active member.

Sec. 3.—Any person who has distinguished himself in the encouragement of Model Auto Racing in any manner, or who has rendered the Club services or benefits, or whom for any other reason the Club may see fit to honor, may, if he is not already a member, be elected to the honorary membership of the same by a two-thirds (⅔) vote of the members present at any regular meeting or at any special meeting called for such purpose. Such a member shall be exempt from all taxes and assessments of the Club, and such members shall enjoy the same privileges as active members, but they shall have no vote, hold no office, nor have any interest in or title to the property of the Club.

Sec. 4.—A written or other secret ballot shall be made use of for the election to membership. Three (3) negative ballots shall reject, and such candidate's name shall not be considered for a period of six months after such rejection, and only in the usual way of admitting new members. A rejected candidate's initiation fee and dues shall immediately be returned to him.

Sec. 5.—The Club reserves the right to reject any and all applicants whom it may consider detrimental to the interest of the Club.

Sec. 6.—Every application for membership shall be made on the regularly prepared blanks issued by the Club, be signed by the applicant with personal full name and address. Every candidate must be proposed and vouched for by two (2) Club members in good standing; their signature must also appear on the application.

Sec. 7.—After a candidate's application has been voted upon and accepted by the Club, it cannot be withdrawn except by a written request signed by the candidate.

Sec. 8.—If at any meeting the names of more than one candidate be submitted which have been investigated and approved by the Membership Committee, the names of all such candidates shall be voted for all at the same time, and should there be no negative ballots all shall be declared duly elected; but should one (1) or more negatives be found amongst the ballots so cast, then the name of each candidate must be separately voted upon.

Sec. 9.—Every candidate, after being elected, shall be conducted to the Chair and there take the following obligation—

I (give name) hereby sincerely pledge my honor as a man that I will not reveal any private business or proceedings of this Club, or any individual actions of its members; that I will without equivocation or evasion and to the best of my ability abide by the Constitution and By-Laws; that I will abide by the will of the majority, and that I will at all times, as far as I can, aid a fellow member.

If the elected candidate is absent at the time of his election to membership, he shall at the first meeting he attends, take the above obligation.

ARTICLE 3.

Officers, Board of Directors, Committees

Sec. 1.—The Officers of this Club shall be: a President, Vice-President, Secretary, Treasurer, and Referee. (In small clubs of say less than 25 members, the Secretary and Treasurer may be combined).

Sec. 2.—There shall be a Board of Directors consisting of the President, Vice-President, Secretary, Treasurer and four (4) members at large.

Sec. 3.—There shall be three (3) standing committees, to wit: a Membership Committee, a House & Track Committee, and a Competition Committee. These Committees shall be appointed by the President at the first meeting in January and shall serve for one (1) year.

ARTICLE 4.

Election of Officers and Directors

Sec. 1.—All Officers and Directors shall be elected annually and shall serve in their respective office for a period of one (1) year. The annual election shall take place at the last meeting in December.

Sec. 2.—Nominations for offices to be filled at said election, shall be made at the last regular meeting in November. Additional nominations can be made at any subsequent regular meeting including the meeting at which the election is held. Nominations shall close at 9:00 PM on the day of election.

Sec. 3.—Any member in good standing is eligible for nomination and election to any of the elective offices, providing he has been a member for (one year—this period optional), but no member shall be nominated or elected to more than one (1) office, nor can he serve pro tempore in more than one office, except as prescribed in Art. 3, Sec. 1 and 2. This clause shall not prevent a member to serve on two, or more committees.

Sec. 4.—Any member of the Club may nominate, or second a nomination, provided he is in good standing. A nomination will not be considered unless it conforms with these rules.

Sec. 5.—A member should be present at the time his name is placed in nomination for an office and should state whether he accepts the nomination or not, but if a member is physically unable to be present and his name is placed in nomination for office, then he shall be notified in writing or otherwise, and he shall, in turn, notify the Club whether he wishes to hold office or not.

Sec. 6.—A candidate's name, after it has been placed in nomination and seconded, cannot be withdrawn except by the candidate himself, verbally or in writing.

Sec. 7.—A printed or written ballot shall be made use of at the election of all officers and the member having the greatest number of votes cast for the office to which he was nominated shall be declared elected to such office.

Sec. 8.—A special committee shall be appointed to supervise and conduct the election of officers, but a member who is a candidate for office shall not be eligible to serve on such committee.

Sec. 9.—Officers and Directors shall be installed at the first meeting in January and give the following pledge:—I (give name) do hereby sincerely pledge my honor as a man that I shall faithfully discharge the duties of my office as (mention office) of this Club; that I will support the Constitution of the Model Race Car Club and its By-Laws, and that I will enforce the same to the best of my ability, without prejudice or partiality.

ARTICLE 5.

Duties of Officers and Directors

President

Sec. 1.—The President shall be in his official place at all regular and special meetings and call the meeting to order for business at the regular stated time, announce its business, sustain order, explain and decide questions of order, appoint committees not otherwise provided for, recognize speakers, submit motions, put to vote all questions regularly moved, announce results, sign all necessary legal and financial documents of the Club and orders on the Treasury. He shall act as an ex-officio member of all committees.

Vice-President

Sec. 2.—It shall devolve upon him to discharge the duties of the President in his absence or when called upon by him to do so.

Secretary

Sec. 3.—The Secretary shall keep in books furnished him by the Club a roll of all members, with their names and addresses. He shall keep a correct record of the proceedings of each meeting of the Club and enter the same in a book to be known as the minute book, said minutes to be entered therein before the meeting following that of which they are a record, and which shall be read for approval. He shall send to each member, and when directed to each Honorary member, notices of all meetings at least three days prior thereto. He shall be the custodian of the seal and all legal documents of the Club, and with the President shall sign all written contracts and obligations of the Club, and he shall conduct all official correspondence and perform all other duties of the Secretary. At the expiration of his term in office he shall deliver to his successor, all books and other property belonging to the Club which may be in his possession.

Treasurer

Sec. 4.—The Treasurer shall be the custodian of the Club's funds. He shall collect and keep in the depository approved and designated by the Board of Directors, all moneys and securities of

(Continued on page 35)

OVERHEARD OUTSIDE!

By BILL DECKER

SUNDAY at our house means about an hour of extra sleep, church and then racing! *No eating?* Who the heck wants to eat when there's a good race brewin' and there are cars to get ready to run. *"Say Ma, is there any beer left in the ice box, or did that bunch we had over last night clean it out?"* Oh well, I'm too busy to drink a bottle now anyhow. Drat the luck, I got a busted front axle and didn't know it. Guess I'll be a safety man today, or maybe just a spectator.

Gee, the track looks good and I notice some of the boys are here already unpacking their "bucket of bolts". *"Hey Ma, you and Junior get your usual spot with the other member wives and I'm going to go around the other side of the track and watch the races from the outside for a change."* Mmmm, there's a guy with his car pulled up pretty close to the track and that fender looks like a good seat.

"Hi! Nice day, ain't it?" "Sure is,"

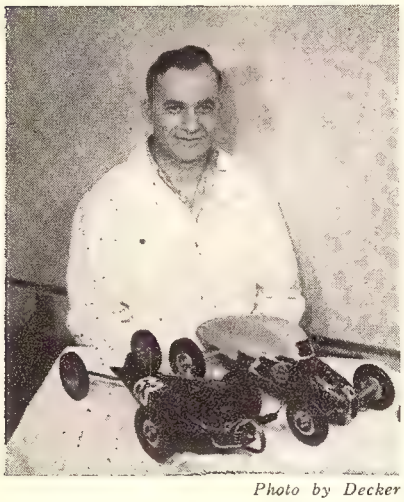


Photo by Decker

Herb Dahnke, Badger Model Racing Association in Milwaukee, with two of his "irons."

says the guy, and turns back to his friends. They're talking away a mile a minuite, so I decides it might be interesting to listen and see what the average spectator had to say about our hobby. This is just about what I hears. . . .

"I thought they was supposed to start at two P.M. Wish they'd quit foolin around and git started. Ah, there is one of them now, number 78 ain't it? Eddy, EDDY! Damn it, where in h- - - does that kid of mine go every time I turn my back? Eddy! Oh there you are. Stay here where you can see the little toy cars. One of the guys at the shop was out here last week and said they had a wreck and broke up a couple. Hope they have another one so we can see it. Just look at them guys! They ain't kids no more and they fool around with them *toys*. Did you say something, buddy?" *"Who—me? No, I was just choking on the smoke from my cigarette,"* I said, easing back on the fender again. . . . "Well I see they got a

(*Continued to page 39*)

GOOD LUCK, YAKIMA

A NEW corner of the race car world is heard from—Yakima, Wash. Four enthusiasts have gotten together (see photo) and are now racing in one of the buildings at the State Fair grounds, not having a track of their own. According to Walt Burnham, this building is fine but the supporting posts limit them to a 25-ft. cable.

They're few in numbers but aim to get things rolling in Yakima, Wash. Left—Clerance and Carl Chappman, Dr. John Moffett, Walt Burnham.

Their biggest problem at the moment is a local ordinance which proclaims such things as model cars, airplanes and boats a *public nuisance!* The boys are taking this problem in their stride however, in order to gain permission for a track of their own. (*More power to you!* . . . Ed.)

STRAIGHT FROM PHILLY

By CHARLEY HIGGINS

SPRING is here and summer is coming down the home stretch. The little women have completed their house cleaning; Junior's lips are still smarting from sulphur and molasses spring tonic, and that "hot iron" expert is contemplating a fuel mixture that will stand up under the terrific change in temperature to be encountered during the coming month. It's time for the race car fan to get away from that gloomy cellar where he has worked all winter long!

The Philadelphia Club has progressed tremendously over the past winter. A steel guard rail has been built around their 70-ft. track, and their membership increased from the original six to thirty-five. The major portion of the club is new blood and has plenty of new ideas. In the past month, the club has adopted a set of by-laws, the greatest part of which have been drafted by the AMRCA and presented to the club by Greg Beard, AMRCA Regional Director, who was present at the last meeting and who also spoke on the advantages of AMRCA membership.

The Reading, Pa. lads have run on our Boomall track quite frequently. Any other club in our district is more than welcome to pay us a visit. Just drop us a line in advance and perhaps we can arrange an inter-club match.

Bill Yocum, who is building a rail track near the Municipal Airport here, has run into bad weather and has not been able to progress on his project as well as he expected.

CRASH RAIL CHATTER: Everybody is ducking our President, **Matt McFattridge** these days. He appoints a new track steward every week and one of the steward's duties is to carry the center post bearing bar and starting motor two blocks to a nearby lunch stand where we store them. . . **Bob Cyliax** just can't stay away from the big midgets. He'll travel a couple hundred miles just to see a race. . . . **Mike Naples** says business is booming in the barber and beauty parlor supply racket, but we bet he doesn't sell very much hair tonic because we're of the opinion he burns it in his Hornet powered Dooling. . . . **Red Lacy's** little blue-eyed daughter is one of the club's most consistent fans. . . . **Walt McWilliams,** who is a civilian crash boat pilot at the Philadelphia Naval Base, has his wife guessing where her vacuum cleaner handle disappeared to. (*Better come out to the track some Sunday and get a look at his starting stick!*) . . . . **Johnny McAllister** wishes he were a silversmith instead of a distillery worker. He just can't seem to make soft solder hold on his needle valve nut. . . . **Art (can't push it) Dressler,** the news photog, has to eat before he leaves the house for racing. Asked why, Art replied, "My wife says if we don't eat before I leave for the track, we'll never eat on Sunday!" Art is always the last one away from the track when the sun begins to set. . . . *So long till next time.*

AMRCA SANCTIONED MEETS FOR 1947 SEASON

April 27	Danville, Illinois
April 27	Lafayette, Indiana
May 11	Lafayette, Indiana
May 25	Champaign, Illinois
May 25	Trenton, N. J.
May 30, 31, June 1	"Little Indianapolis," San Francisco, Calif.
May 31	Trenton, N. J.
June 8	Kankakee, Illinois
June 8	Kearny, N. J.
June 15	Long Island, N. Y. (Championships)
June 22	Rock Island, Illinois
July 6	Eastern Regionals; Mid-West Regionals at Waukegan, Illinois; Southern Regionals; Western Regionals
July 13	St. Louis, Mo.
July 20	Indianapolis, Indiana
July 20	Salina, Kansas (State Meet)
July 27	New Castle, Ind.
Aug. 1,2,3 or 4	Nationals (location to be decided by popular vote)
Aug. 3	Harvey, Illinois
Aug. 10	Kankakee, Ill.
Aug. 10	Long Island, N. Y.
Aug. 17	Hartford City, Indiana
Aug. 24	Harvey, Ill.
Aug. 30, 31	Detroit, Mich. (Midwestern Champ.)
Sept. 1	Harold Loose Memorial Race
Sept. 7	Lafayette, Ind. (Proto)
Sept. 14	Peoria, Illinois
Sept. 28	New Castle, Ind.
Oct. 11, 12	San Francisco, California

Above dates and locations are subject to change by request of clubs concerned. Only two bids have been received from Clubs on Regionals and Nationals. Please send formal bids to AMRCA Contest Board.

AMRCA CLUB CONSTITUTION

(*Continued from page 33*)

the Club. He shall keep proper books of account and shall pay no bills unless ordered by the Club or by the Board of Directors. He shall give a detailed account of all financial transactions and the money on hand at each regular meeting of the Club. He shall withdraw no money from the depository except authorized by a majority vote of the members present at a regular meeting; the order of withdrawal shall be signed by the President and the Treasurer. At the expiration of his term of office he shall deliver to his successor, all books and other property belonging to the Club which may be in his possession.

Board of Directors

Sec. 5.—The Board of Directors shall have a general supervision of the Club's funds and property, they shall meet at least once a (month —optional) and shall consider all matters referred to them by the Club. A majority shall constitute a quorum for the transaction of business, and they shall submit a written report of their proceedings to the Club. They shall have authority to make contracts or purchases, but shall have no power to render the Club, or any member thereof, liable for any debt beyond the amount of money which shall at the time of contracting such debt be in the Treasurer's hands, and not needed for the discharge of prior debts or liabilities, nor to make any contracts or purchases in the name of the Club involving more than twenty-five (25.00) dollars in amount, without a vote of the Club authorizing the same.

Sec. 6.—The Board of Directors shall at their first meeting elect a Chairman who shall act as such at all their meetings during the year. The Chairman of the Board of Directors shall appoint a Secretary who shall keep a correct record of the proceedings of all meetings of the Board of Directors.

Sec. 7.—The President, Secretary and Treasurer shall render at the last regular meeting in December, recapitulated reports in writing of the year's transactions in their respective offices.

ARTICLE 6.

Duties of Standing Committees

Sec. 1.—The membership committee shall be composed of three (3) members and they shall during their term of service, consider all applications for membership and make careful investigation as to the qualifications of candidates; if a majority of the committee be opposed to the admission of the candidate, the name shall not be further acted upon, but if a majority be in favor, the name shall be reported to the Club at the next regular meeting. All communications to the membership committee shall be considered confidential.

Sec. 2.—The house and track committee shall be composed of four (4) members and shall have charge of and keep the track, club rooms and furnishings and track equipment of the Club in proper condition for use of the members, and shall make and keep posted rules for governing the use of the rooms and track, subject to the approval of the Board of Directors. The committee shall have charge of any storage or shop accommodation which the Club may be able to furnish its members.

Sec. 3.—The competition committee shall be composed of seven (7) members consisting of a Referee, Chief Steward, Recorder, Starter, Timer, Weight Master, Line Master.

Referee

Sec. 4.—The Referee shall be thoroughly familiar with and enforce all rules and regulations. He shall arbitrate all disputes or other irregularities. His decision shall be final. Or, it is the privilege of the Race Committee to submit the facts of the case in writing to the National Board of Governors for arbitration. A committee of at least two contestants may also register a complaint for arbitration with the National Board of Governors against any ruling of a Referee or Race Committee, provided the complaint is in writing, sent to the National Board of Governors within five days after the racing date, and signed by Contestants Committee, who shall be A.M.R.C.A. members in good standing.

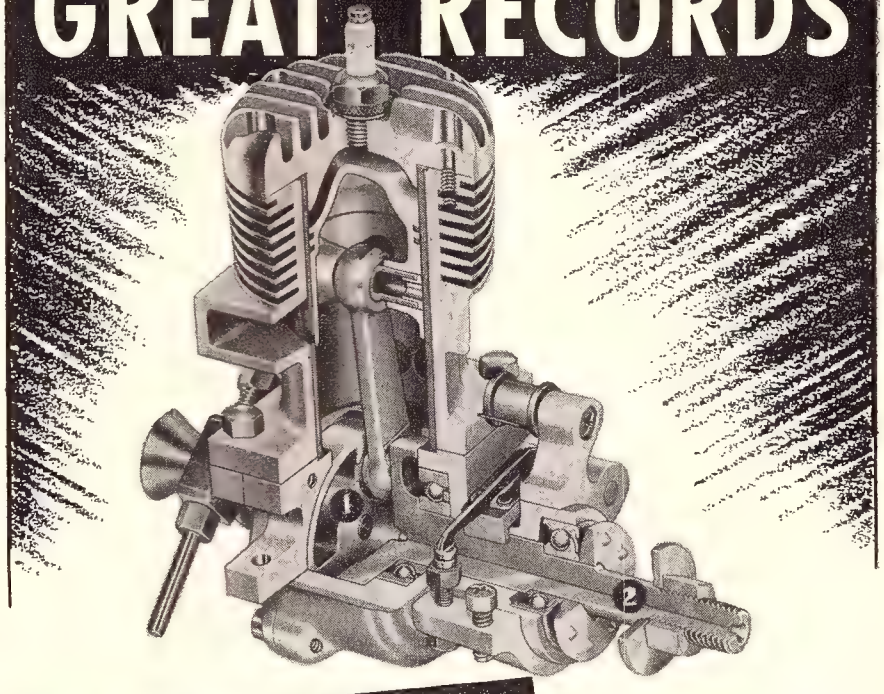
Chief Steward

Sec. 5.—Chief Steward shall be in charge of all racing activity and responsible only to the Race Committee. He shall see that each official properly attends to his duties and each official shall be directly responsible to him. He shall have authority in all matters pertaining to the running and management of the Race with the exception of the decision of the Referee, unless he is acting in that capacity himself. It shall specifically be the duty of the Chief Steward to notify each contestant of his racing schedule and all other matters necessary to expedite the racing program.

Recorder

Sec. 6.—The Recorder's duty shall be to keep a record of the starts, runs, times and speeds and make them public immediately after each run by means of a blackboard or loudspeaker as soon after each run as possible. He shall furnish the Race Committee with a complete and detailed record of every run in a race immediately after

Good Reasons For GREAT RECORDS



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These are a few of many HORNET records:

● Spur Gear Record, Waukegan, Ill., Sept. 1, John Crossan, V car Hornet powered, 118.27; Dale Martel, Proto Hornet powered, 113.21; Loose Memorial, Fred Luning, Spur Gear Hornet powered, 118.73; W. T. Thomas, Jr., New Spur Gear Record, Own Car, Hornet powered, at Eustis, Florida, 120.32.

● Speed Boats: Joe May, Detroit, Mich., July 4-6, 1946, new world record in Class D and E, speed 65.53 m.p.h., winning Gar Wood trophy and Model Craftsman plaque.

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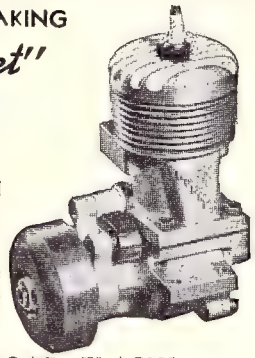

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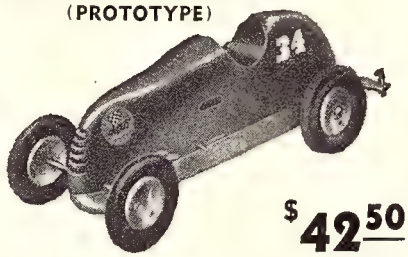

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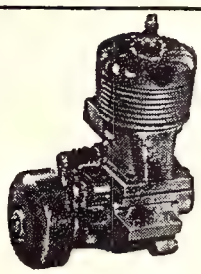

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the race is finished. A copy of each sanctioned race's activity shall be mailed to the Secretary of the A.M.R.C.A. within five days after the race date. Forms for these records shall be furnished upon application for sanction. All such reports shall be signed by the Referee.

Starter

Sec. 7.—It shall be the duty of the Starter to call contestants to the starting line and assist them to start their cars on their course, assuming the same duties as outlined for the Line Master whenever necessary. It shall be his duty to see that the track is clear before allowing a contestant to start his car on the cable. The Starter will be responsible for the starting time granted each contestant.

Timers

Sec. 8.—Timers shall give their undivided attention to races. The Chief Timer will time each run separately. If an electric or mechanical timing device is used, the time shall be verified by both the Chief Timer and the Assistant Timer before the stop-watch is reset. It is specifically understood that 1/100 second stop-watches shall be used with either electric or mechanical timing devices at all Regional or National races, and shall be verified as to correctness within 1/10 second for 10 minutes by a registered railroad match inspector.

Weight Master

Sec. 9.—The duties of the Weight Master shall be to remove each car from the line immediately after each official run and weigh it, notifying the Recorder of a car's weight before returning it to the owner. It is understood that a contestant may stop his car and remove it from the track at any time except when the car has made an official run. It shall be the duty of the Weight Master to watch the car when in motion on the track and if at any time the car performs in such an erratic manner that it may get out of control and cause an accident, he shall immediately stop the car by whatever means he deems advisable, preferably by shutting off the switch. When a contestant's car has been thus stopped, the contestant shall adjust or repair his car to remedy the trouble and shall be allowed another run without penalty. Any member of the Race Committee, except Timers, may act as the Weight Master.

Line Master

Sec. 10.—It shall be the duty of the Line Master to attach the cable to a contestant's car and lead it off on its course until the car has gained sufficient momentum to keep the cable taut after the motor has started, and may lead the car as many laps as necessary. However, the official time cannot be taken until car has completed three free laps under its own power. It shall also be the duty of the Line Master to inspect the hitch or bridle of a car, all cables and track equipment, and if found to be faulty, he shall immediately inform the Chief Steward, who will authorize necessary repairs before continuing the race to insure a maximum of safety factors.

ARTICLE 7.
Resignations and Reinstatements

Sec. 1.—Any member may at any time resign from the Club provided he shall have paid his indebtedness thereto, and provided that there be no action on his part calling for investigation, censure, suspension or expulsion. Such resignation shall be in writing and addressed to the Club and acted upon at a regular meeting.

Sec. 2.—If at any time a member, who has been suspended for non-payment of dues, wishes to rejoin, he can do so by a two-thirds (⅔) vote of the members present and the payment of (Five (5) Dollars—optional).

ARTICLE 8.

This Club shall not dissolve so long as there remain seven (7) members desirous of continuing the same. Nor shall the remaining funds or property be divided in any manner so long as there are seven (7) dissenting votes. When dissolution takes place, the remaining funds and property of the Club shall be divided equally.

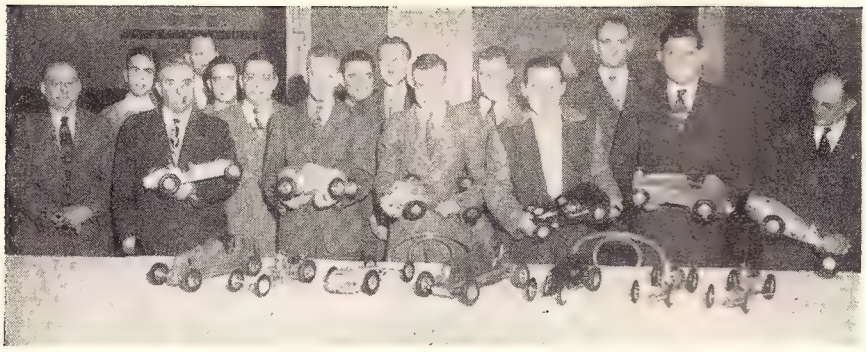
This Article shall not be subject to change by ANY motion.

ARTICLE 9.
Amendments

Sec. 1.—This Constitution may be altered or amended at a regular meeting, or at a special meeting called for that purpose, by a two-thirds (⅔) vote of the members present. The intended amendment shall be presented in writing, stating the particular article and section to be amended and read at two (2) consecutive meetings before acted upon. All members shall be notified in writing when, and where such meeting shall take place.

Sec. 2.—The foregoing section does in no way apply to Article 8 of the Constitution which is not subject to any alteration or amendment.

(Recommended by-laws for the above constitution will be published next month.)



Meet some of the gang from the New Castle Club, New Castle, Ind. Left—Joe Dehlsen, Gene Burnside, Russell Harter (Secretary), Harry Dietrich (Indianapolis), Bob Luellen, Gene Wallace (Indianapolis), Ray Stohler, Urban Harvey (Hobby Dealer), Joe Olender (Indianapolis), Joe Fadely (Track Steward), Dr. Earl Morris (Muncie), Philip Smith, Howard Lee Paynter (Track Referee) and Ernie Luttrell (President, 1014 Southern Ave.).

FAIRFIELD CLUB ANNOUNCES PROGRAM

THE Fairfield County Race Car Club of Stratford, Conn., will hold an open meet at their Stratford track on May 4th, to be held over until May 11th in event of rain. All race fans take note—this is an invitation to ALL! They will also hold the Connecticut State Championship Race this season, definite dates to be announced later. All Connecticut racers and Clubs, please contact their secretary. The New England States Championship Meet is scheduled for Aug. 10th, with Aug. 17th as alternate date. Contact Charles Cartwright, 34 Pacific St., Stamford, Conn.

At their annual election held Feb. 17th, the following officers were elected: Bill Smith, President; Tommy Beck, Vice-Pres.; Walter Orgeinus, Treas.; Charles Cartwright, Sec'y and Neck Reback, Track Steward.

DETROIT ELECTS NEW OFFICERS

AT a recent meeting held by the Detroit Miniature Race Car Association, the following officers for 1947 were elected: President, Ed. McCullough; Vice-President, Glenn Fairabend; Secretary, Johnny Weightman; Treasurer, Jim Ogden.

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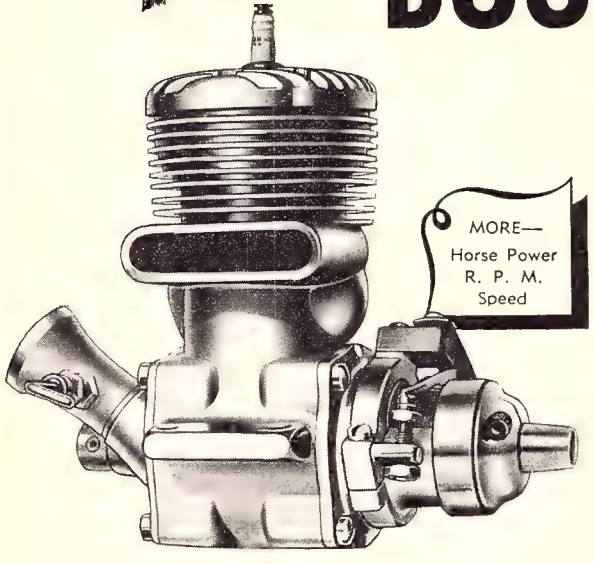

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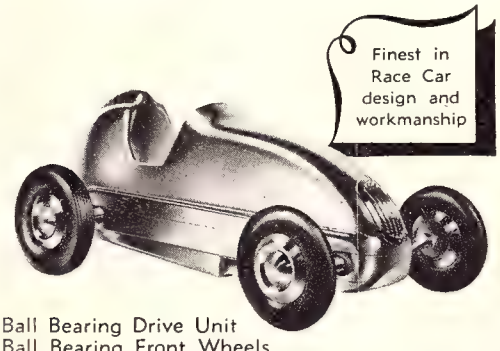

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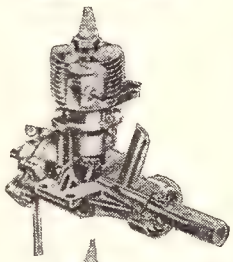

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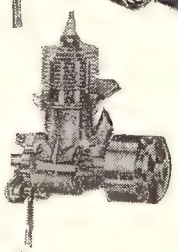

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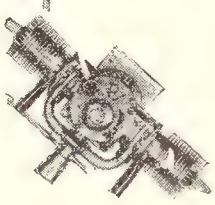

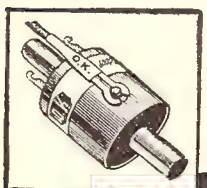

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"PAPPY" HERBERT VISITS THE WEST

DURING his recent visit to the west, "Pappy" Herbert, promoter of the coming East-West Championship Contest, met many of the local hot shots and came to admire and respect them. This came about largely after witnessing their marvelous demonstration of flying at their well-lighted flying field, although he only saw 50% of the flights because of fog. According to "Pappy", those fellows must have instrument ratings to be able to fly so well without seeing their model, because he knows full well they couldn't see it most of the time. He also realizes why they have such good precision pilots, as 80% of their landings are blind. Rest assured this gang in the San Diego area are regular guys and superb model builders. As Herbert puts it, "I didn't meet a braggart in the bunch."

According to "Pappy", design and building trends are the same throughout the country. He feels there should definitely be a Class established for those model builders who make a business out of flying, rather than just a hobby, and not just dealers and manufacturers. This Class would then be known as the Professional Class. As a suggestion in determining this group, he sites the example of a "red hot" model builder who places first in 12 major meets, who would automatically be classed as professional. Or a builder could register with the A.M.A. as a professional model builder, and would in turn compete against men of his own standing, rather than against the man or youngster who flies for pure enjoyment. Prizes for the Professional Class would be monetary rather than merchandise or trophies. If and when such a Class is established, we could have professional circuits and race once a week before crowds of paid admissions, just as they do in the automotive field. Frankly, what chance has the ordinary model builder against such men as Babcock and Newburger. Neither do we believe these gentlemen enjoy competing against the novice, just the same as Joe Louis fighting some local high school heavyweight champ.

SCHENECTADY PLANS AIR DERBY

GET busy with the razors, fellas, there are prizes in the air! The local paper of Schenectady, N. Y., the Schenectady Union-Star, in cooperation with the local model airplane club, is offering $700 in prizes at the Eighth Annual Air Derby, June 29th.

The big meet will be held at the Schenectady county airport, three miles out of the city, a triple A regional contest with any modeler over 12 years of age eligible for entry. With no entry fee, the only requirement for entry will be that contestants be licensed members of AMA. The Derby will be staged under the regular contest rulings of AMA with a meet director and full list of events. Prizes include cups, model kits, gas engines and a full line of building accessories. The meet will start at 8:30 A.M. and last until 5:00 P.M., rain or shine.

List of events include: a special beauty event for best looking model entered that will pass a 10-second power flight and 10-second glide. Hand launched gliders; tow-line gliders; hand launched rubber stick; cabin rubber models, ROG; Class A, B and C free flight; Class A, B and C control line speed and stunt.

Exceptions to the AMA rules on control line planes will define model classes as follows: Class A, motor disp. 0 to .20; Class B, .20 to .30; Class C, .30 to .65. Line lengths required are Class A, 35 feet; Class B, 52½ feet; Class C, 70 feet.

Further information and application blanks may be obtained by writing the Model Air Derby Editor, Schenectady Union-Star, Schenectady, N. Y.; Raymond Voigt, 202 Jackson Ave., Schenectady; Edward Holeva, Four Star Model Builders Supply, 116 State St., Schenectady.

CORRECTION

We correct the caption which appeared last month, stating the present Class D Speed Boat record is held by Ed Kalfus of New York Club. Joe May of Detroit now holds this record with 70 MPH, Ed Kalfus being the former record holder at 52 MPH.

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Babcock design Super-Sonic Gears hold all world speed records. Super-Sonic Gears are made of finest alloys—super-finished—freest running gears made.

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OVERHEARD OUTSIDE

(*Continued from page 34*)

P. A. system set up, maybe we can find out what's going to happen, listen!" *Time trials will start in about 5 minutes.* "It's about time, I'm gettin' awful hot here in the sun. I don't know how them halfwits in there can stand it, running around poking their noses into everyone's car.

"Ah, now the boys are going towards the track, so maybe we'll see a car run. Yep, that guy's hooking his to the rail. Say, they make a lot of racket for such a little hunk of junk! There he let it go, here it comes! EDDY, did you see it go by? It's pickin' up speed awful fast. EDDY get back from that fence a little, do you have to put your nose through the wire? Seems like everyone is moving back a little. Maybe we're too close, too! EDDY, get down from there. If that car came off at that speed and hit you in the head, it would be terrible and I would have to pay for it. . . . your head, I mean. I don't know how much the car costs. . . . 15 er 20 bucks, I suppose There, he shut it off. I had no idea they went that fast.

"What's that guy over there doing with that can with the long hose on it? Maybe he's pumping up the tires. No? Oh yes, the hose is to the top of the car. Maybe oil for the motor! Look at that guy over there, he's taking the whole rear-end out. Probably needs some grease or somethin. Don't look like he'll race today, he's got the whole bench covered with tools and parts. Ha, ha, did you see that guy jump! He touched the spark plug just as that guy turned the wheels. Must be sharp! How do you suppose they hold them things on the track? You ain't sayin much Joe, are you mad or something? Oh, just interested. Well, wait till you see a race. I think they race about four at a time. Yep, here come four now. Boy, look at the smoke! Here they come. I can't hear you Joe, what did you say? What? There's too much noise, wait till they shut them things off. Eddy, where are you? Hey, whatcha doing with that stick? Get away from there. Do you want to get hurt? *You want to stop one?* Cut that out or you'll have those *nuts* in there on my neck. Come on over here and watch the race with Daddy. Come here before I knock your head off. See, now the race is over and I didn't see who won. Why can't you be like other kids? Hey Joe, who won? The purple one? Why Joe, there wasn't even a purple car in that race! Maybe it's too hot out here. Let's get going and get a cool glass of beer and come back later. I hope we won't miss a wreck! Eddy, come on, we're going now, get into the car. EDDY! You heard me. What do you mean you can't, you got your ear caught in the fence? How in h--- did you do that? Listening to the cars! What's the matter with you, you deaf? There now, get into the car. Yes, we're coming back! Sorry Buddy, you'll have to give up your seat there on the fender, we're going now. Them little things sure go, don't they? Guess it takes all kinds of people to make a world, but I didn't think there was anyone that nuts to stand out there in the red hot sun and run *toys* around a track. So long!"

Toy cars . . . 15 or 20 bucks . . . nuts . . . funny people? Maybe he's right! Say, I guess it is pretty hot in the sun here. I better sit in the shade and cool down. I had a wild feeling when that guy said those things, just like murdering someone. Oh well, maybe some of the spectators like to see us run. *What a day!*

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ATTENTION MONTREAL!

HEY you fellas in the vicinity of Montreal, Canada! Why not get together for mutual assistance and get a club started for racing in the states. All veteran racers and beginners alike, are urged to contact William Vertilneck, 711 Prevost St., Lachine, Quebec, Canada, at their earliest opportunity. Bill is a member of AMRCA and is anxious to set up an active group in Montreal.

EVANSVILLE ASKS FOR NEW TRACK

SPEAKING for the Evansville M.R.C.A., Dr. Forrest Snurpus appeared before the City Park Board of Evansville, Ind., requesting a new concrete track to replace their present track, now obsolete and in bad condition. He further stated that the present site had no safety devices as protection to the many spectators following their activities.

The Evansville Club consists of twenty members, their present track being located in Howell Park.

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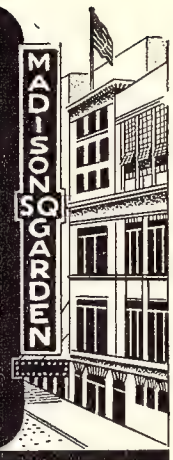

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SWITCH	.5 oz.	NO
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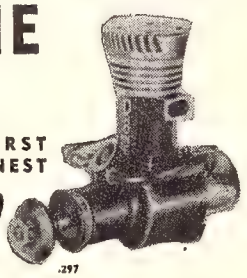

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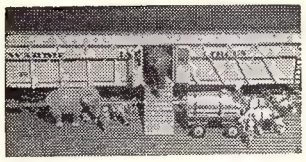

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Every kit comes complete with easily understandable instructions, cast metal wagon sides with all the fancy scroll work, cast metal 16 spoke circus wheels, high grade basswood construction with paneling in front and rear, movable front axle undergear, etc.

Everyone who has ever built a Railroad Car will be fascinated with the idea of building a line of circus wagons. If you haven't a flat car (or Stock Car) and wish to own one, kits for them cost $2.95 for Stock Car—$1.50 for Flat Car.

Our line of Circus Wagons is already a big one—Water Tank Wagons, Cage Wagons, Ticket Wagons, Stake and Chain Wagons, Pole Wagons, Canvas Wagons, Commissary Wagons, etc. In addition, we have a complete line of Animals, Horses, Drivers, Clowns, etc. If your dealer can't supply you, place your order direct with us. Send for our illustrated Catalogue for only 25c.

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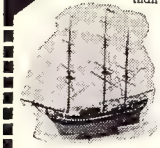

GS-1	Submarine	$4.95
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SAN DIEGO HOLDS MONTHLY MEET

SINCE the initiation of their new 70-ft. cable track located at Pacific Beach, the San Diego Club has successfully run off two of their regular monthly meets, the second being held on February 9th. Over 25 cars were in evidence, although all did not enter competition. Prizes were awarded in two classes only, Prototype and Hot Rod. Winners follows:

PROTOTYPE (Mfg.)

Name—Engine	MPH
C. Brown (McCoy)	93.75
J. Dickson (McCoy)	85.75
J. Mansell (McCoy)	84.90
B. Tupper (Hornet)	84.11
A. Copeland (Hassad)	84.11

HOT ROD

C. Brown (Hornet)	84.11
E. Nothwang (Hornet)	81.81
J. Dickson (McCoy)	78.26

Lehigh Valley Club Reorganizes

THE Lehigh Valley MRCA in Bethlehem, Pa., is reorganizing with most of their old members returning to the club, having been idle for a few months locally while attending outside meets. Those already pledging to return are H. Fox, Al Tarquin, C. Noll, B. Miller, F. Baca, J. Cululi, R. Knauss, Ramsey, Stout and J. Petrakis. Many more members in the Valley have not been contacted as yet, but will be if they were a former member. New enthusiasts in the hobby should contact James G. Petrakis, 447 Beech Street, Bethlehem, Pa., as the Club will welcome new members.

Complete arrangements were made to have a concrete cable track laid some time in March. Their first organizational meeting has already been held, so those interested should get busy and contact the club.

KEEPING UP WITH WASHINGTON

THIS is the first piece of news to leak out from that busy city of Washington, D. C., on race car activities at the Washington M.R.C.A. Their present track was built with the savings of Paul Schlosser with the help of Bob Kirwan, Ellis Johnson and "Spence" Spencer. The track was poured last July and racing began immediately, the crash fence, spectator fence, work benches and lights coming later. The present track is an extremely smooth 1/32 mile which, despite its size, has been sufficient to get the hobby started again around Washington. Before the war there was no track, but the hospitality of the Annapolis Club was extended the Washington boys.

First cars to run were Ellis Johnson's Atwood powered Whirlwind and Paul Schlosser's Hornet-Interceptor which served to keep up the interest of the spectators while the rest of the boys (many of whom had never seen a model car run) worked the bugs out of the new cars.

The Club officially formed September 1, 1946, with a Tri-City Invitation Meet being held Oct. 27th with York, Pa., and Baltimore, Md. attending. High spur-gear speed was 102.00 MPH and 87 MPH high in proto.

The Club now has 21 members with the following officers: Pres., Bill Ison; Vice-Pres., Paul Schlosser; Treas., Bob Kirwan; Sec'y, John Beveridge; Referee, Lt. Col. E. L. Taylor. Members of the Board of Directors are Comdr. Ross Bullard; Lt. Col. E. L. Taylor; Bernie Heiss and Eddie Anders.

Any visitors to Washington and vicinity can reach the Club by phoning Bob Kirwan, Chestnut 1871; Bill Ison, Union 1182; John Beveridge, Wisconsin 4819.

Pike Registry Bureau

D LEE R. R., Raymond A. Snow, Syracuse, N. Y. (HO)
GLASS CITY ROUTE, E. A .Robedeau, Toledo, Ohio (HO)
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LONG ISLAND TRACTION, Nick Munzing, Richmond Hill, N. Y. (O)

NEW 1947 MODELS

THE Toy Fair has rolled around again and here we present the news of the latest developments of American tinplate. Reconversion difficulties having now been largely overcome, things are getting back to normal, and it is anticipated that everything announced at this time will actually be available by the end of 1947.

The year 1947 will go down in tinplate history as the long awaited year that a cycle was completed and the electric type locomotive came back! The biggest news from Lionel is that they will put out a 4-6-6-4 model of the Pennsylvania Railroad GG1 type, fitted for both third rail operation and overhead pick-up through working insulated pantagraphs. This model is O gauge and appears to be 3/16" scale proportioned. It will be equipped with a sounding horn.

Other additions to the Lionel line are a 2-6-2 Penn RR. styled steam type, an automatic unloading refrigerator car from which a milkman emerges and pushes milk cans onto a platform, a depressed center flat car carrying a transformer, a new O gauge proportioned semaphore, new telegraph poles, and a new smoking device which substitutes a special heating unit for the bulb used last year.

American Flyer's developments this year are largely in the field of control. The switcher and 4-8-4 will be equipped with permanent magnet motors, allowing directional remote control and operated from A. C. house current through a new 150 watt rectiformer. This unit will also deliver A. C. for accessories. Of even greater interest to model railroaders, however, is the use of this system for operating two trains on the same track, each entirely independently controlled. One locomotive is fitted with a permanent magnet, and the other with a series wound motor and sequence reverse. Both operate on D. C. through the rectiformer. When the polarity is changed, the permanent magnet locomotive reverses, but the change is made so quickly as not to break the flow of current and the sequence reverse is unaffected. When the current flow is momentarily broken however, the sequence reverse operates, but the per-

manent magnet is not affected. Thus each engine is separately controlled.

American Flyer will make HO sets again this year (they were cataloged but not made in 1946) and will equip the locomotives with permanent magnets, chuggers and smoke. Another development is that the H1 gauge cars, which were made all plastic last year, will be made with plastic bodies and die-cast underframes in order to lower the center of gravity and improve the operation.

1947 also marks the entry of two new American tinplate train manufacturers. One, Mechanicraft, Inc., is producing a three car, H1 gauge, streamlined mechanical train with spiral spring motor and speed control. The track, though of essentially conventional tinplate design, will be furnished unassembled for the purchaser to put together by snapping the ties into the bottom of the rail.

The second manufacturer is the J. L. Schilling Co., who will produce an O gauge all plastic two-car passenger train, powered by a new motor which operates from four 1½ volt flashlight batteries which are contained in a control box. Directional remote control is featured, as well as automatic couplers. While the plastic molding and other features make it very modern, it is in many ways directly in the good old American tradition of a small, colorful, typical tinplate passenger set.

Other new developments are set of plastic railroad figures, each about 2½" high by the Bergen Toy & Novelty Co., a new model Junior Bridge which employs a continuous arch on the side trusses, instead of the double arch of the pre-war models, and a reverse and all-steel track for the "Buzza" locomotive.

PITTMAN OFFERS NEW LOAD DISPATCHER

FILLING a demand for DC supply, Pittman Electrical Developments Co., Sellersville, Pa., now offers their 75-20 Load Dispatcher designed to furnish 12 volts DC by merely plugging in the unit to house current outlet (110-130 V.). Of sturdy construction, the unit will easily combine with other Pittman panels. Transformer and Selenium Rectifier rated 4 amps. at 12 volts DC for continuous duty. Rectifier is open-mounted for maximum cooling.

In order to maintain constant voltage, a practical arrangement using a manual voltage regulator, permits a selection of load demand for any given time. A friction knob is provided for selecting five positions, each varying in amperage drain according to number of locomotives in use on track. Upon test, five HO locos were easily handled simultaneously with plenty of power on hand.

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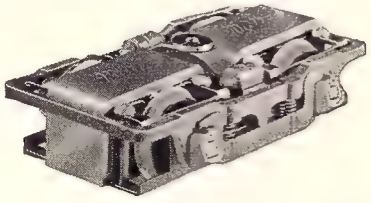

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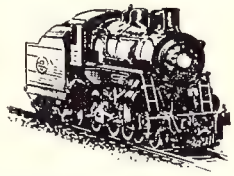

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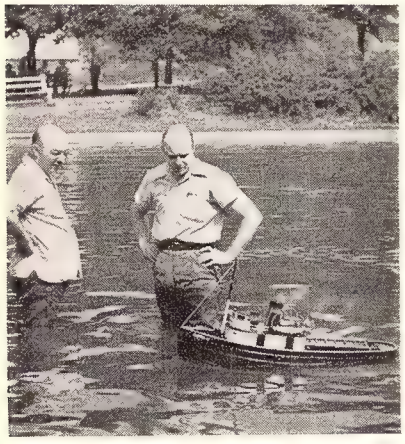
SUMMARY OF GAUGES

(courtesy NMRA)

Gauge	Scale to Foot	*Track Gauge
1" Scale	1"	4.750"
¾" Scale	¾"	3.531"
17/32" Scale	17/32"	2.500"
No. 1	3/8"	1.750"
O(17)	17/64"	1.250"
O	¼"	1.250"
Q	¼"	1.188"
S	3/16"	.875"
OO	4 mm.	.750" (19 mm)
HO	3.5 mm.	.650" (16.5 mm)
On3	¼"	.750"
On2½	¼"	.625"
On2	¼"	.500"
Tinplate ¼"	¼"	1.250"
Tinplate 3/16"	3/16"	.875"

*Represents distance between outside rails.



Testing the "Martha M." Wint (left) and Charles Trible (father and son) watch the initial test run after tug was completely rebuilt.

"MARTHA M" TUG

BUILT from photos alone, the "Martha M" tugboat is the original work of Wint Trible, President of the Cincinnati Society of Model Engineers. Having quite an eye for laying out ship's lines, no drawings other than a few chalk lines on his shop floor were made for constuction of the tug. After hundreds of hours of faithful operation, the tug was shelved due to engine wear and the seams opening. After collecting dust on the shelves during the war, Charles Trible, son of the original builder, rebuilt her completely as shown in above photo. The hull, decked in mahogany and trimmed in white oak, was originally made from white pine and is now copper plated.

The boat measures 52½" from stem to stern with a 10¾" beam. The engine is water cooled by a small displacement-type pump operated from an eccentric on the propellor shaft. Pump is fitted with a ball-check valve. Power plant boasts a starting mechanism that rewinds the starting rope automatically, thus making the starting of the engine much like the manipulation of a "yo-yo". This feature, when combined with a three-lb. flywheel and special carburetor designed for low speed operation, makes starting and running an absolute certainty.

Those interested in further details may contact Charles Trible, 3600 Pape Ave., Cincinnati 8, Ohio.

Here's one way of beating a shortage of building materials! Midgage Models of Portsmouth, R. I., manufacturers of S-Gauge equipment, utilizes two obsolete box cars to expand their quarters.

TWO CARLOADS OF FACTORY!

HERE'S a good one for the record—How to beat the building material shortage! Faced with the necessity of building additional shop facilities to accommodate increased production of S-gauge equipment, Midgage Models of Portsmouth, R. I., realized they could not obtain the necessary material and equipment for this expansion in short order. But model railroaders must have their goods and so they managed to procure through cooperation of the New York, New Haven & Hartford RR. two obsolete wood-sheathed 36' box cars.

They laid and ballasted 75 feet of 60 lb. rail across the corner of their factory lot. Then by means of a low semi-trailer, these two cars were rigged from the New Haven siding about ¾ mile distant to their position shown in the photo. Windows were cut in one car and this unit used as an office with an operating "S" gauge model railroad display layout in one half of the car. The second car is used for storage with machinery being installed to provide additional manufacturing facilities. Located at the junction of two main highways leading from Newport to Providence and Fall River, these cars have been the subject of considerable interest and curiosity among passersby who are at a loss to understand how they "got there."

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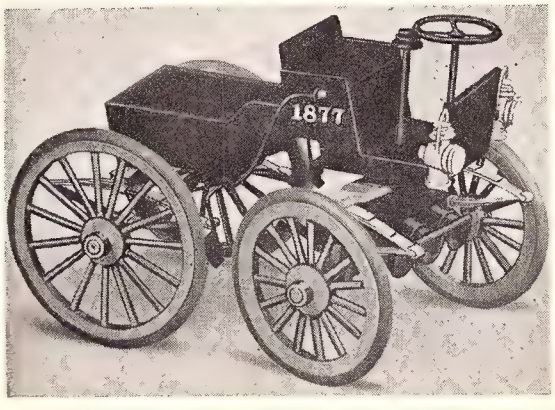

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SPECIAL TRAIN SCHEDULED FOR NMRA CONVENTION

MODEL rail fans may well get excited over prospects of the coming NMRA Convention, for equally as important as the convention itself is the trip by Special Train scheduled from Chicago to Oakland, California and return. Chairman Jim Munson had the railroader in mind when this trip was planned.

The convention itself, sponsored by the Pacific Coast Region and the East Bay Model Engineers Society, will be held August 15th to 17th, at Oakland, Calif. As planned, all rail enthusiasts attending the convention from the East, Southeast and Midwest will meet at Chicago on August 10th and proceed together to Oakland by special train. The entire trip will take 13 days, allowing one day for travel to Chicago to complete your full two-weeks vacation. The Special will leave via the Burlington, Rio Grande, Western Pacific Route, including several worthy side trips of interest to all rail fans. Among these will be a side trip on the narrow gauge up over famed Marshall Pass. Since passenger service is no longer operated on this line, it is something to anticipate with pleasure. The return trip is scheduled via Southern Pacific with stopover at Santa Barbara to take in the Channel Model Railroad Club. At Los Angeles, trip will continue via Santa Fe with special stopovers at Cajon, Glorietta and Raton Passes as well as a side trip to Grand Canyon. Motor trips will be available along the rim to the Watch Tower overlooking the Painted Desert and pack trips down the trail should attract many.

Every possible need of visiting rail fans has been carefully planned for by the Transportation Committee. Train reservation requests must be in the hands of their Chairman no later than June 30th. Address your requests to Mr. Emil H. Beck, Transportation Chairman, 921 Fox Theater Bldg., Detroit 1, Mich.

R. R. CLUB NEWS

(Continued from page 6)

be required to join. Present officers are: Charles Robb, Pres.; Franz Hartmann, Vice-Pres.; Al Corneil, Treas.; Lee Yetter, Secretary; Ernest Schuler, Alt. Secretary; Roger DiRocco, Ass't Treas.

PHILADELPHIA, PA. The Penn-Jersey Society of Model Engineers has recently organized as subsidiary of the Penn-Jersey Railroad Club. The parent organization is a railroad fan club in existence for over one year and flourishing. With many of their members model fans, they formed a model club, comprised of fifteen members, all of whom are members of the parent group which numbers 23.

The model group is financed separately and is governed by officers of the parent club except for a Sec.-Treas. of their own. They have raised a sizable "nest egg" and are now looking for quarters. Gauge of layout will be determined by available space, the club including fans in O, S and HO Gauges.

Prominent among their members is Edwin P. Alexander, recognized as one of the founders of organized model railroading, founder of the well-known Westchester Model Club of New York and author of a book on model railroading and other works.

Present officers are Ben Nixon, Pres.; E. P. Alexander, Vice-Pres.; M. Stewart, Sec.-Treas. (model club); H. Sheaffer, Sec.-Treas. (railroad club).

PITTSBURGH, PA. New officers of the Pittsburgh HO Club are H. A. Schultz, Pres.; Samuel J. Hyle, Vice-Pres.; A. R. Yeske, Sec.; R. Mares, Treas. Their layout is now undergoing extensive alteration (postwar ideas) and five Cab Controls are being installed, the first having gone into operation some time in March.

The Pittsburgh crew can be well proud of itself—they celebrate their 10th anniversary November 21, 1947. They also hold the honor of being the first 100 per cent NMRA Club in the country. Addi-

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The "999" in HO Gauge ..... Sept., Oct. '44
1st Prize in HO Layout ..... Oct. '44
2nd Prize in HO Layout ..... Nov. '44
Open-End Gondola Car ..... Dec. '44
HO Draft Gear ..... Dec. '44
Three HO Layouts ..... Feb. '45
C & O Mountain Type Locomotive ..... Mar. '45
Laying Out HO Pikes ..... Apr., May '45
0-8-0 Switcher ..... May '45
Cement Hopper Car ..... June '45
Consolidation and Tender ..... June, July '45
"S P" A-6 Atlantic ..... Aug. thru Nov. '45
Pennsy T-1 Locomotive ..... Sept., Oct. '45
Powerful Electric Engine GG-1 ..... Oct., Nov. '45
6000 N.Y.C. Loco & Tender ..... Nov. '45
Central Vt. Loco. ..... Jan. '46
C & O Hopper Car ..... Jan. '46
Southern Pacific 4-4-0 ..... Mar. thru June '46

O GAUGE

Motorized Wrecking Crane ..... Sept. '44
Mother Hubbard 4-4-2 ..... July '46
Suburban Double Ender ..... Sept. '46

OO GAUGE

Six Passenger Cars ..... Nov. '44
War-Time Car Building, Express Reefer ..... Apr. '45
Double-Deck Sleepers ..... Apr. '45

PROTOTYPE DIMENSION PLANS

Railroad Station (Plans in HO) ..... July '44
Old Royal Blue Cars & Loco. ..... Aug. '44
Coal Breaker ..... Nov. '44
"Old Time" Railroad Station ..... Dec. '44
New Troop Kitchen Car ..... Feb. '45
Four Free Lance Cars ..... May '45
Reading Camelbacks ..... June '45
Burlington's "Vista-Dome" Observation Car ..... Nov. '45
U.P. 800 Class Loco. ..... Dec. '45
Erie Caboose ..... Jan. '46
C. & N.W. Pacific 4-6-2 ..... Feb. '46
B. & O. Mallets ..... June '46
Penn E-6 Atlantic ..... Aug. '46
Loco Traveling Crane (all gauge) ..... Oct. '46

RAILROAD MISCELLANEOUS

Building Model Locomotives ..... Jan., Feb. '45
Laying Out HO Pikes ..... April, May, July, '45
A Model Saw Mill ..... July, Aug. '45
Bridge Warnings ..... Nov. '45
HO Trestle ..... Dec. '45
Simple Crossing Gate ..... Dec. '45
Standard Brick Signal Tower ..... Jan. '46
How to Build Tunnels ..... Feb. '46
Bridges ..... Mar. '46
HO Coal Tipple ..... Apr. '46
A Terminal Throat ..... May '46
A Big Interurban Layout ..... June '46
V & T Passenger Station ..... July '46
Track & Scenery Foundation ..... Aug. '46
Three-Way Switch ..... Aug. '46
A Simple Interlocking Plant ..... Sept., Oct. '46
B. & O. Coal Tower ..... Sept. '46
Speaking of Water Falls ..... Oct. '46
Does Your Layout Have a Church? ..... Oct. '46

TROLLEYS

Model Cattle Car (Prototype Dimensions) ..... July '44
Shooting Trouble on HO Motor Trucks ..... Oct. '44
Trolley Wirework ..... Nov. '44
Interurban Depot & Substation ..... Feb. '45
Hudson & Manhattan Tube Cars ..... Mar. '45
Interurban Mail ..... Apr. '45
"Open Air" Elevated Railways ..... June '45
Yards, Barns & Terminals ..... July '45
Trolley Work Cars ..... Aug. '45
Trolley Snow Plows ..... Nov. '45
Trolley Front Ends ..... Dec. '45
Trolley Freight Service ..... Jan., Feb. '46
Power for Your Trolley ..... Mar. '46
Double Cab Work Car ..... Apr. '46
Pacific Electric Car (O Gauge) ..... May '46

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Valve Gears, Gear Frames & Boiler Saddles (¾" sc.) ..... July '44
Boiler Injector & Lubricator (½" sc.) ..... Aug. '44
Engine Pilot, Pilot Beam, Water Gauge (½" sc.) ..... Sept. '44
Single Cylinder, Steam-driven Feed-Water Pump (½" sc.) Oct. '44
Home-Made Cylinder Cocks (½" sc.) ..... Oct. '44
Atlantic Live Steamer, ¾" scale
Nov., Dec. '44, Jan., Feb., Mar., May, June, July '45
½ H. P. Horizontal Steam Engine ..... Feb., Mar., May '45
Boiler Feed-Water Pump (½" sc.) ..... Feb. '45
Advantages of Inch Scale ..... Mar. '45
Cab, Coupler, Drawbar Pocket, Bell, Dome (½" sc.) ..... Apr. '45
Boiler Construction Hints ..... May '45
Assembly & Connections (½" sc.) ..... June '45
Steam Driven Water Pump ..... Oct., Dec. '45, Feb. '46
Stationary Steam Engine ..... July thru Oct. '46

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Hi-Rail-Cantilever & Steel Arch Bridges ..... July '44
Suspension Bridges ..... Aug. '44
Adding Human Interest to Your Layout ..... Sept. '44
Wherefore "Hi-Rail"? ..... Oct. '44
Flag Stops ..... Nov. '44
"Combination" Stations ..... Feb. '45
Smooth Scaling ..... Mar. '45
Car Kinks ..... May '45
Improved Tin Type Trucks ..... July '45
Realistic Tinplate Cars ..... Dec. '45, Jan. '46
Tin-Types "Trued to Life" ..... June '45
Along the Tinplate Track ..... Monthly Feature

AIRPLANES

"Tiger Meat" Class C Guide Liner (Millet & DeBolt) ..... Oct. '45
Dizzy "B", U Control (Greene) ..... Nov. '45
"Butch", Class C Guide Liner (DeBolt) ..... Dec. '45
"Moldy Molecule", Class B & C Guide Liner (DeBolt & Thomasian) ..... Jan. '46
"Super Bat", New Design (Shulman) ..... Apr. '46
"Thunderwin", U Control (McElwee) ..... May '46
The "Atomic", U Control (Shulman) ..... June '46
"Pigmy", Free Flight Class A (Marinelli) ..... July '46
"Pirate", Control Liner (McGovern) ..... Sept. '46
"Anzac," Class C Free Flight (McCullough) ..... Oct. '46
Your Engines (Class A & B Survey) ..... Aug. '46
Your Engines (Class C Survey) ..... Sept. '46
Engine Maintenance & Operation ..... Sept. '46
Folding Props (Thomas) ..... Oct. '46

ELECTRICAL ARTICLES

Home-Made Telephone ..... July, Aug. '44
Battery Charging Hints ..... Aug. '44
Switch Motors from Doorbells ..... Oct. '44
Polarity Indicator ..... Oct. '44
A. C. Power Supply ..... Nov. '44
Radio Control for Model Layouts ..... Dec. '44
Crossing Gates, Electrically Controlled ..... Dec. '44
Wind Your Own Magnets ..... Dec. '44
Home-Made Rheostats ..... June '45
"Per-Mag" Switch Machine ..... Aug. '45
O Gauge Motors ..... Oct. thru Dec. '45
Universal Wiring Circuit ..... Apr. '46
Train Control Rheostat ..... June '46
Lighting Your Trains & Buildings ..... May '46

RACE CARS

Molding Car Bodies ..... July '44
Getting Ready for Racing ..... Mar. '45
Building a Model Race Car ..... May thru. Nov. '45
How to Get More Speed ..... May '45
Trouble Shooting ..... Feb. '46
What Type Racing Car? ..... Mar. '46
Test Car #1 ..... Apr. '46
Test Car #2 ..... July '46
Rail Track Construction ..... May '46
Cable Track Construction ..... June '46

BOATS

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tional prestige is due their club, having the honor of their past president, Mr. E. R. Campbell, being the 1947 NMRA president.

The club cordially invites all Model Rails to their club rooms at 1013 Penn Ave., Pittsburgh (across from Fort Pitt Hotel), any Monday evening, designating the third Monday of each month as Operating Night.

PARKERSBURG, W. VA. A new HO club has just been organized under title of "Ohio and Little Kanawha Railroad" with their HO layout now being planned. Officers of their new club are President, Charles Schimke; Vice-Pres., Jack M. Payne; Sec.-Treas., William G. Brown. Meetings are held every Monday night at 7:30 P.M. at various members' homes for the present. Those interested should contact the group through their Secretary at 3409 Linden Ave., Parkersburg.

BALTIMORE, MD. Congratulations are due the Baltimore Society of Model Engineers on their 15th birthday! With the problem of finding new quarters fresh in mind, the boys are now preparing plans for their new O gauge layout. According to comments of club member Robert Lance which appeared in their paper, The Switcher, some very definite ideas should be incorporated. He advocates the use of ATC as well as the use of individual cab control over the main line. According to Lance, "ATC will work perfectly well in conjunction with cab control. The cabs can be cut out when it is desired to operate the entire layout from a central control board."

Lance further advocates the use of "Two-Rail" for perfect realism. "The layout should be designed on a single track basis but laid out to give the appearance of double track. This is in accordance with the model prepared by Uncle Roland Hewitt and displayed at the club rooms on March 7th. His layout, modified by the addition of a couple of passing sidings, a through passenger terminal and a few industrial sidings, should be ideal.

"Last but not least, we should make adequate provision for an interurban trolley line. There's no denying that an operating trolley line adds a great deal to public interest in the layout as a whole."

ROCKFORD, ILL. "OO" Dean Wilson reports a new model club in Rockford, the road name—"Rock Valley Lines", with a motto, "Serving the Rock Valley". Brass hats of the road are Dean Wilson and Lyle Baie.

Their motive power consists of one 600 H. P. (E. M. C.) diesel switcher; one 4-6-0; one 4-6-4; one 4-8-4 (all running). Now under construction: one 1000 H. P. Road-Yard Alco diesel; one snub nosed E. M. C. pass. loco; one E. M. C. combination pass. & frt loco. and two 4-8-4's. Rolling stock consists of eight passenger cars, thirty freight cars and two crummies. Not bad for a new two-man club! Layout is built in a room 13′ x 16′, located at 2040 Idaho Parkway.

ROCK ISLAND, ILL. A group of eight men got together on March 7th and formed a model railroad club under the name of "Quad-City Model Railroaders." Officers elected were Dick Canterbury, Superintendent; Jim McIntire, Comptroller, and Mark Canum, Chief Clerk. HO gauge is being used at present, but other gauges will be used if interest warrants it. All persons with a sincere interest in model railroading are invited to attend meetings at The Boot, 1733 30th St.; membership is still open.

SAN DIEGO, CALIF. Culminating several months effort on the part of Marion Charles, the Balboa Park Model Railroad Club was organized on February 15th, with Charles as President, William Bell, Vice-President, A. H. Keith, Sec-Treas., and Frank Cox as Gen. Mgr.

The Club will build an O-guage, two-rail layout in a room 24 x 84 ft. in the State Bldg. in Balboa Park. This room is being provided rent free by the City of San Diego Recreation Dept.

Initiation fee is $5.00 for Charter Members and dues have been set at $1.00 per month. Anyone interested, contact the Secretary at 3827 Polk Ave., San Diego 5, or phone Randolph 2591.

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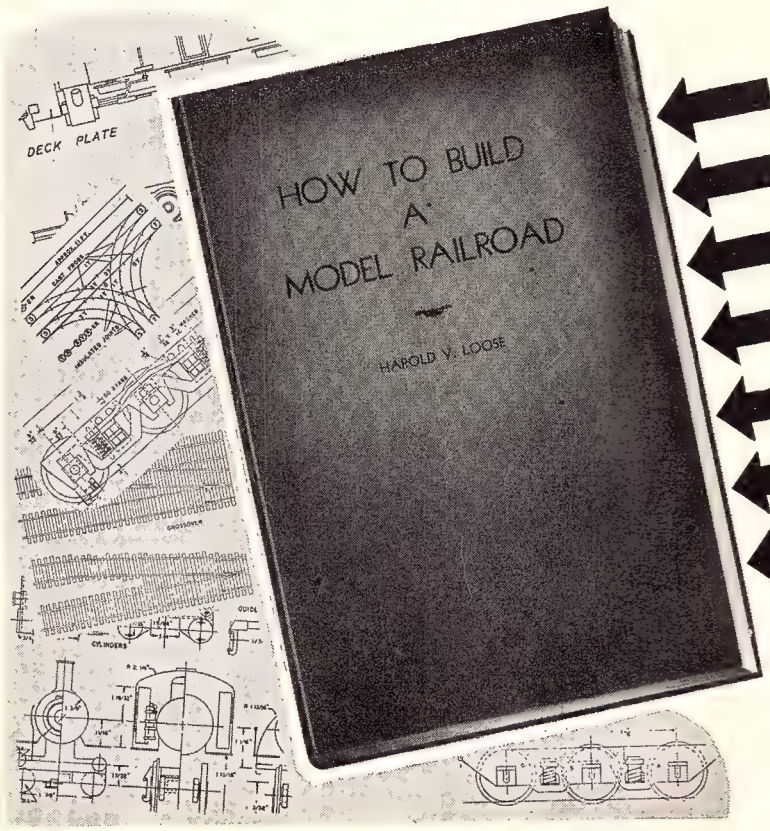

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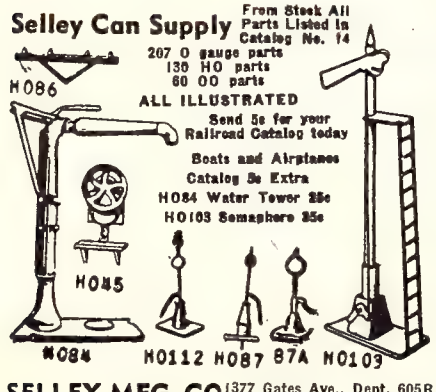

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ALONG THE TINPLATE TRACK

(*Continued from page 21*)

selves almost entirely to manufacturing. Consistently among their line of tin toys were both pull toy and clockwork trackless locomotives and trains, and other tinplate items.

They prided themselves in offering "new, pretty and saleable articles," adding "many improvements in style and finish," paying "particular attention to avoid all sharp edges and corners," and painting in "bright brilliant colors." From the very start, the superintendent of their factory was one Herman Thomas, responsible for several ingenious inventions and exclusive features.

Primarily of course, we are interested here in their trains, of which they made an extensive line with 0-4-0, 2-2-0 and 4-2-0 locomotives. The 4-2-0 wheel arrangement was particularly favored by them and was used on the majority of their medium and large sized locomotives. A balloon stack was also characteristic of many models, although later they seemed to have switched to a form similar to the usual tinplate train representation of the diamond stack of the day.

In design and quality, their clockwork locomotives were essentially similar to Ives. At times, they incorporated a few refinements of their own, such as handrails at the cab, elaborate cast lead decoration on the drive rod, and a notched steering mechanism on the front truck so that it might be locked in any desired position and the diameter of the circle the locomotive would travel regulated accordingly. Althof, Bergmann made their clockwork locomotives in four sizes during the early 1870's, small, medium, "medium fine" and "large fine." The first two were 2-2-0's and the latter pair 4-2-0's, and were also available with an automatic ringing gong arrangement. For some years following the Civil War, most of their clockwork locos were named "Union."

Althof, Bergmann also put out their share of pull toy and clockwork horse car replicas, their most elaborate model in this class being almost two feet long. Their piéce de résistance however, was their elevated railroad, traveling from a central motor on a permanent 19" diameter circle, which appeared around 1878 or 1879 shortly after the first elevated railroad was opened in New York.

This was Althof, Bergmann's great triumph in the tinplate train field but even before its introduction, they had reached the full meridian of their glory. The firm went bankrupt for the first time in January, 1878, owing more than $200,000. Cause of this failure is unknown, but on the top floor of New York City's ancient Hall of Records, sifting the dusty papers relating to the affair, an odd psychological error was discovered which sheds some light on the competition faced by Althof, Bergmann, and what was on the minds of some of those concerned in its affairs.

One of the creditors was Quincy A. Atwood of the firm of Dunham, Ives & Co. His name, however, was written twice on the list of creditors served as being of "Ives, Blakeslee & Co." This error was corrected, but the original writing still remains for all to see.

The company recovered from this bankruptcy however, and carried on until a second bankruptcy in January, 1886, wrote "finis" to its affairs. At that time, the company was a co-partnership, composed of Louis Althof and William C. L. Rubsaman, although Cronemeyer was still connected with the firm. All were employed by the assignee during liquidation.

At this point, Herman Thomas, factory superintendent, stepped in and bought the machinery and tools for $6,904.31. What he acquired was described as "a lot of machinery, which was called a factory for the manufacture of tin toys. This machinery consisted of dies and stamping machines and articles of that character, which have their season, and are more or less valuable according to their novelty, some of the dies being objects which cost a good deal to make, and which were used at times, so that the toys when they become out of fashion are of very little worth."

Here enters the great remaining mys- of Althof, Bergmann. The company vanished from the scene after the liquidation, yet when Thomas bought the factory it was stated that he "was very desirous of obtaining the machinery intact in order as far as possible to preserve the good will of the house of Althof, Bergmann & Co." From 1886 to 1900, Thomas is listed in the Brooklyn Directories as a toy manufacturer, yet no record of a Herman Thomas Co., or anything similar can be found. At least one undated toy jobber's catalog illustrates models made on Althof, Bergmann's dies at a date which appears to be in the early 1890's. The manufacture of Althof, Bergmann products, including trains, was apparently continued by Thomas. Quite likely, some surviving old locomotives which have been identified as "Althof, Bergmann" should more accurately be termed "Thomas" products. Thus, in clearing up one mystery of tinplate history, we have uncovered another, which shall continue to puzzle us until the key is found and the jig-saw is at last complete.

INTERLOCKING WITHOUT RELAY

(*Continued from page 15*)

sets of each slide switch. Thus the set of points "a" in Fig. 5(C) is on the same block with the set "a" in Fig. 5(c). The same holds true for point sets "b" and "c."

Looking at Fig. 5(C), note the entire track section 1 is one section, controlled as such from the control board. Other sections are indicated 2 to 6, their leads ending in arrows. All controller rail sections are labeled *yy* in this diagram.

Working principle of this unit is as follows: If a train approaches from the right of the track diagram, it will not pass signal D unless *all* track switches of the unit are set straight. If any one is bent into a siding, the CRS at signal D will be dead. This is accomplished by connecting sets of points in each slide switch in series. Thus if any one of these point sets is not connected by the inlaid strips of the moving plate, the entire jumper circuit is open. Note that pulling

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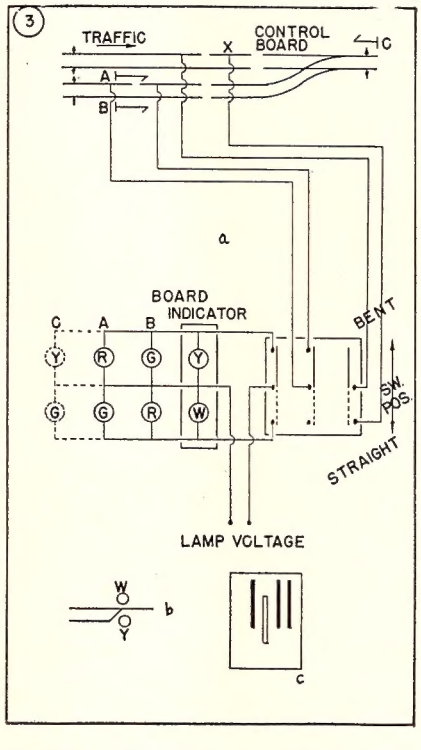
the slide switch lever *down*, sets a track switch straight and sets the connections indicated by dotted lines.

Looking at Fig. 5(a) you will see a relay glaring at you. Sorry, but we need one for this unit. Only one is needed, no matter how many ladder tracks there may be. The complicated arrangement shown at lower left is actually part of three separate slide switches. Each elongated "I," plus the code letters a, b and c, will clear up the confusion. As mentioned before, the point sets labeled "a" on this diagram are controlled by the same moving plate as the one labeled "a" in Fig. 5(C). Dotted lines indicate the position of the inlaid strips when track switch is set straight. Note the leads p and p'. These are connected together.

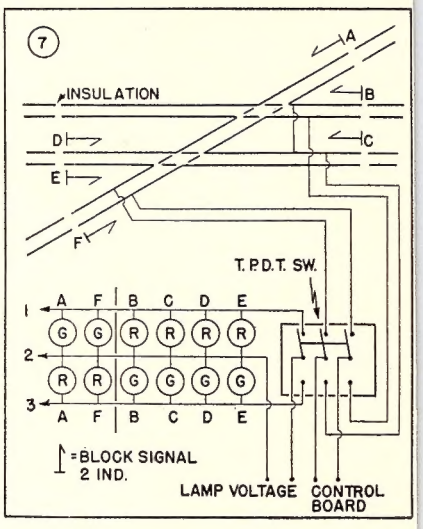
Let's set some switches and see what happens. First set all track switches straight. The signal circuits closed by this move are indicated by the dotted lines. The relay is energized since all its series connected point sets on the slide switches are jumped by the inlaid strips. The arm of the relay is pulled to the *on* position. The signal aspects are as follows: Signal A, B and C—red, D and E—green. (Signal E is on against traffic signal and may be omitted.) With these signal aspects the only CRS alive is that beside signal D. Thus trains approaching through any ladder track will be stopped by that track's dead CRS.

Now let's bend switch X by pushing



the slide switch lever up, setting up the moving plate contacts indicated by the solid lines "a" (note that one inlaid strip makes no connections in this circuit set-up). Immediately the relay drops to *off* position because one of the point sets has been cut out. The signal aspects now are: Signal A—green, B, C and D—red, E—yellow. The CRS by signal A is alive while all others are dead. The same relative procedure holds for switches Y and Z when they are bent.

A breakdown in the protective quality of this interlocking unit is noted when i.e., track switches X and Z are both bent Nothing prohibits a train proceeding through track switch Z and hitting Y set against it. An interlocking system to make this impossible is now being designed.



When control board indicator lights are desired such as illustrated in Fig. 3-b, they are obtained by cutting in parallel to each signal light and bringing leads to the board. Such indicators would, in a measure, overcome the shortcomings just noted.

In Fig. 7 we illustrate the last interlocking unit to be described here. It is really the most simple, requiring only a TPDT knife switch to operate it. If you are using the slide switch described and want to use it here, just omit the switch machine contacts under the bracket top. Use a plate like that shown in Fig. 3-c. Note, however, that detail of insulation around crossovers has been omitted; it will be the same as is usually employed.

For working principle, consider the double track main line. Note that all tracks receive their current supply through the same control board switch, the double track main line being connected in parallel. If the TPDT switch is thrown as indicated in the diagram, the single track is alive, the main lines dead. Signal aspects are: A and F—green, B, C, D and E—red. When the TPDT switch is thrown in alternate position, the aspects are: Signals A and F—red, B, C, D and E—green.

The lengths of the track sections should extend at least 24" on either side of the actual crossover. Signals are placed at the beginning of each section as illustrated. (Note: The controller rail section coupled with each signal in any of the units just described should be located beside that signal or just a little before it. A train should never pass a red board and then hit the dead CRS).

Automatic block signals are a second phase of this business of preventing wrecks. The data on block signal circuits, however, must be left until next time. Plans for constructing *scale* HO bull's eye signals are on the drawing board *now!*

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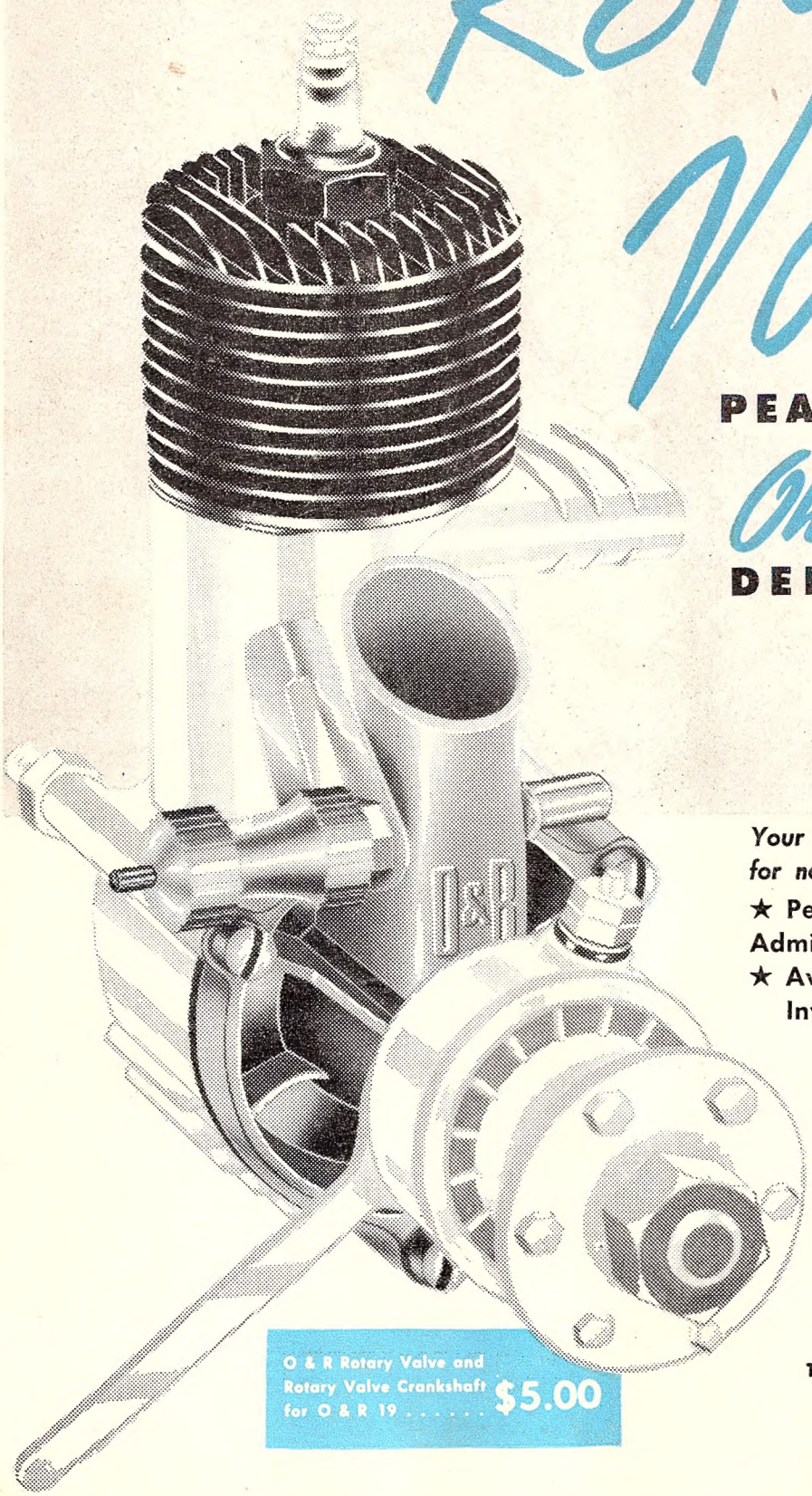

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